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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Hearing held
8th floor
180 Dundas Street West
Toronto, Ontario

Rowe: Re-man

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence
for
September 1, 1983

VOLUME 27

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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN
AND RELATED MATTERS.

Hearing held on the 8th Floor,
180 Dundas Street West, Toronto,
Ontario, on Thursday, the 1st
day of September, 1983.

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THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

- - - - -

APPEARANCES:

P.S.A. LAMEK, Q.C.)	Commission Counsel
E. CRONK)	
T.C. MARSHALL, Q.C.	Counsel for the Attorney- General and Solicitor General of Ontario (Crown Attorneys and Coroner's Office)
I.G. SCOTT, Q.C.)	Counsel for The Hospital
R. BATTY)	for Sick Children
M. THOMSON)	
B. PERCIVAL, Q.C.)	Counsel for The Metropolitan
D. YOUNG)	Toronto Police
W.N. ORTVED	Counsel for numerous Doctors at The Hospital for Sick Children
E. SYMES	Counsel for the Registered Nurses' Association of Ontario and 35 Registered Nurses at The Hospital for Sick Children

(Cont'd)



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1 APPEARANCES: (Continued)

2	H. SOLOMON	Counsel for the Ontario
3		Association for Registered
		Nursing Assistants
4	D. BROWN	Counsel for Susan Nelles -
		Nurse
5	E. FORSTER	Counsel for Phyllis Trayner -
6		Nurse
7	B. KNAZAN	Counsel for Mrs. M. Christie -
		R.N.A.
8	J.A. OLAH	Counsel for Janet Brownless -
		R.N.A.
9	S. LABOW	Counsel for Mr. & Mrs. Gosselin,
10		Mr. & Mrs. Gionas, Mr. & Mrs.
		Inwood, Mr. & Mrs. Turner, Mr.
11		& Mrs. Lutes and Mr. & Mrs.
		Murphy (parents of deceased
		children)
12	W.W. TOBIAS	Counsel for Mr. & Mrs. Hines,
13		(parents of deceased child
		Jordan Hines)
14	F.J. SHANAHAN	Counsel for Mr. & Mrs. Dominic
15		Lombardo (parents of deceased
		child Stephanie Lombardo); and
16		Heather Dawson (mother of
		deceased child Amber Dawson)
17	J. SHINEHOFT	Acting for Lorie Pacsai and
		Kevin Garnet (parents of
		deceased child Kevin Pacsai)



INDEX OF WITNESSES

<u>NAME</u>	<u>Page No.</u>
<u>ROWE</u> , (Dr.) Richard Desmond, Resumed	4909
Re-Direct Examination by Mr. Lamek	4909
Further Cross-Examination by Mr. Shanahan	5027
Re-Direct Examination by Mr. Lamek (Cont'd)	5040

INDEX OF EXHIBITS

<u>No.</u>	<u>Description</u>	<u>Page No.</u>
166	Article entitled "Ventricular Irritability Associated with the Use of Naloxone Hydrochloride".	5042



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---Upon commencing at 10:00 a.m.

THE COMMISSIONER: Yes, Mr. Lamek.

MR. LAMEK: Mr. Commissioner, I understand from Mr. Shanahan, who cannot be here at the beginning of today's sitting, that he has a couple of questions arising out of the additional sheet to the Lombardo chart which was filed yesterday afternoon. Possibly we can admit him at the first convenient break in the action after he arrives.

THE COMMISSIONER: Yes, all right, we will do that. That reminds that I did have a couple of announcements, one I think I have already made. Namely, I think regardless of how your progress is we are going to, Dr. Rowe and I, are going to be leaving at 4:15.

MR. LAMEK: We will carry on, sir, that's all right.

THE COMMISSIONER: The other thing is next week is the start of the Jewish holidays, and I understand the only day we have to worry about is Thursday. I also understand from the scheduling that there will be, that Dr. Freedom will probably be starting his evidence on Tuesday and there is very little chance of his being completed before Thursday in any event. That, Jewish counsel will simply, if it



1
2 is convenient, if they can cross-examine on Wednesday
3 and if not on Monday, and I hope that is going to be
4 all right.

5 MR. LAMEK: It is expected that
6 Dr. Freedom's evidence in chief may be completed
7 some time on Wednesday and there may be some cross-
8 examination starting therefore on the Wednesday
9 afternoon, but I am sure it will extend over the
10 Thursday to the following Monday.

11 THE COMMISSIONER: Yes, I don't
12 think there is going to be any problem. If by any
13 chance we should complete all the other cross-
14 examination on Thursday we will just proceed on the
15 following Monday, and we are starting on the Monday,
16 that will be the 12th I believe, we will be starting
17 on the Monday. If there are any problems in connection
18 with that of course by all means speak to us today.
19 That's it.

20 MR. LAMEK: Thank you, sir.

21 DR. RICHARD DESMOND ROWE, Resumed
22 RE-DIRECT EXAMINATION BY MR. LAMEK:

23 Q. Dr. Rowe, I suppose I should
24 first ask you what I asked you the other day, that
25 is what did you do before you became a witness. I
hope we can get you back to it very soon.



1

2

A. I hope so too.

3

Q. Dr. Rowe, in the course of

4

certain of the cross-examinations there have been

5

veiled, and sometimes not so veiled suggestions that

6

when I examined you in chief I was selective and

7

restrictive about those matters in the medical

8

records to which I drew your attention, and about

9

which I asked your opinion.

10

The transcript will demonstrate it,

11

sir, but do you not recall that with respect to

12

each of the Hospital records I asked you a series

13

of questions, something like this. This one,

14

Mr. Commissioner, is taken from Volume 15, with

15

respect to Stephanie Lombardo, at page 2547. The

16

question was, and having summarized the course from

17

the death report, and remember that was part of the

18

pattern that we established.

A. Yes.

19

Q. I asked you:

20

"Subject to the qualifications we want

21

to discuss, Doctor, is that a fair

22

overall summary of major events over

23

the course of this baby in the

24

Hospital?

25

A. Yes.



1
2 "Perhaps we can go to the matter that
3 you addressed and indeed to any others
4 that you think are significant and
5 should be considered in trying to
6 arrive at an understanding of how this
7 child died just when she did.
8 A. Yes.
9 Q. And understanding the manner
10 of her death?
11 A. Yes.
12 Q. Could you take us to those
13 parts of the chart, Doctor, that are
14 important in your view for that
15 purpose."
16 Do you recall, Doctor, that I repeatedly
17 asked you a similiar series of questions with
18 respect I think to each one of the records that we
19 discussed?
20 A. Yes, you did.
21 Q. And did you feel any restraint
22 or inhibition in identifying and speaking about
23 anything in the record that you felt to be important?
24 A. No.
25 Q. And let's be clear, Doctor,
over the course of my questions in re-examination you



1
2 understand you are entitled to raise any matters
3 that you think are necessary, or helpful, to explain
4 any answers you may give, or to assist our under-
5 standing of these very complex matters. That is
6 clear, is it not?

7 A. I understand it.

8 Q. Doctor, you have said from
9 time to time in the course of the cross-examinations
10 that it is important to look at the whole of the
11 Hospital records, and of course that is right.
12 Mr. Strathy asked you a few questions about that if
13 you remember, and mentioned a number of matters,
14 biochemistry results of all kinds; flow sheets with
15 respect to urine output; constant taking of vital
16 signs, and so on; frequency of reporting vital signs.
17 All those things have to be considered as well as
18 the progress notes was the thrust of those questions,
19 wasn't it?

18 A. Yes.

19 Q. And of your answers?

20 A. Yes.

21 Q. The progress notes do however
22 record, do they not, hour by hour, and day by day,
23 the observations made by the patient by trained
24 Hospital personnel, nurses and doctors?
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A. Yes.

Q. And in that sense are the most continuous, closely continuous part of the Hospital chart, are they not?

A. Yes.

Q. Now, you said that if one wants to form the soundest possible judgment of a patient's condition, of course, ~~the~~ one would want to discuss the case with the treating physicians, you have said that frequently, you will recall.

A. Yes, I have.

Q. And I don't question it for a moment, Doctor. As I understood your evidence, it was that they may not have recorded in the written record all of their observations and impressions?

A. Yes.

Q. Is that fair?

A. Yes, that is fair.

Q. Now, one would expect of course that they have recorded any significant observations and impressions wouldn't one?

A. Or that they would have instructed someone else to do it.

Q. Yes. Otherwise there wouldn't be much point in keeping a record, would there?



1

2

A. No.

3

Q. And indeed the assumption

4

that a record, a hospital record is complete and

5

accurate in all significant respects underlies, does

6

it not, the whole practice of chart or record review?

7

A. Yes.

8

Q. And that is a not uncommon

9

practice, is it, the review of medical records and
hospital records and charts?

10

A. No.

11

Q. And I do not take you to be

12

suggesting, Doctor, that the records of patients

13

in your division of the Hospital in Sick Children's

14

are so lacking in important information and observa-

15

tions that a trained reader could not form a valid

16

judgment as to the condition and the course of your

17

patients by reading those records, you are not saying
that, are you?

18

A. That he could not?

19

Q. That he could not?

20

A. Well, I think he can, but if

21

he doesn't have the benefit of the other information

22

which may not be inscribed by the responsible physician

23

in detail everyday then he may be lacking in something.

24

Q. He would be lacking something,

25



1
2
3 and in an ideal world he would have that information
4 from the treating physician as I understand it?

5 A. Yes.

6 Q. But he could still form a
7 reasonable judgment on the basis of the reading of
8 the record, could he not?

9 A. I think he could a good number
10 of times, there might be exceptions.

11 Q. But certainly any experienced
12 physician who read the records of the children with
13 whom we are concerned would have, wouldn't he, a
14 reasonably solid base of information upon which
15 to form an opinion as to the severity of the conditions,
16 and of the reasonable prognosis of those children?

17 A. I think he probably would.

18 Q. Doctor, believe me I mean no
19 criticism of you, but he would have a far firmer
20 basis for such an opinion than you have for your
21 scorings of children for the CDC, would he not?

22 A. Oh yes.

23 Q. You were given very little
24 information indeed?

25 A. Yes.

Q. You provided for us a sample
of the kind of information, it is Exhibit 141,



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Mr. Commissioner, and indeed as I recall what you told us, Dr. Rowe, of the very sparse information that was provided to you not all of it was intelligible to you, was it?

A. Yes.

Q. So in fact you were proceeding on even less than they provided?

A. Yes.

Q. Doctor, believe me I take my hat off to you in this, but you didn't say to the CDC that you couldn't form an opinion based upon so little information?

A. No.

Q. I know you didn't feel comfortable about it, what careful physician would, but you did go ahead and you scored severity and prognosis on the basis of that information?

A. Yes.

Q. And I take it you would not have done that unless you had some measure of confidence that your judgment could be sensibly exercised and that you could make a useful contribution to the project?

A. Yes, I suppose that is so.

Q. And your confidence level



1
2 would have been understandably and ^{probably} ~~probably~~ vastly
3 higher if you had been given the entire medical
4 chart, the record, would it not?

5 A. Oh yes.

6 Q. And may I take it therefore
7 Doctor, that nothing that you have said in the
8 course of cross-examination should be taken as a
9 disparagement of the value of a thorough review of
10 the medical record by a trained experienced reader?

11 A. No.

12 Q. Now do you have any informa-
13 tion, Doctor, as to what material, and what data
14 were furnished by the CDC to Dr. Nadas?

15 A. No, I don't.

16 Q. Do you have any information
17 about what material and what data were furnished by
18 the police to Dr. Hastreiter?

19 A. No, I don't.

20 Q. I take it we are at one in
21 hoping it was rather more full information that was
22 supplied to you by the CDC?

23 A. I hope so.

24 Q. I think, Doctor, with respect
25 to the desirability of seeing and examining the
patient for oneself, or at least speaking to the



1
2 treating physician, as I say in ideal world is what
3 one would want to do, is it not true that even among
4 your group of cardiologists you may not always have
5 that advantage. Very occasionally a situation may
6 arise may it not in which that advantage won't
7 be available, and may I suggest one to you.

8 As I understand it if a child gets
9 into difficulty at night, the resident on duty,
10 or the cardiac fellow on call if he is there, calls
11 the staff cardiologist who is on-call that night.

12 A. Yes.

13 Q. Now the on-call cardiologist
14 may be someone other than the ward chief of the month?

15 A. Yes.

16 Q. And I take it it is likely to
17 be someone other than the ward chief?

18 A. Yes.

19 Q. And if the child gets into
20 trouble in the middle of the night, shortly within
21 a day or two of his admission to the hospital, the
22 cardiologist on call may never actually have seen that
23 child, is that fair?

24 A. The cardiologist on the day-
25 time ---

Q. No, the nighttime one on call.



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A. No, he may not have seen the patient but he will have had a handover from the cardiologist who is on call.

5

6

7

Q. He may have, he will have some information at the end of the day when the ward chief turns the ward over to him?

8

9

A. That's right.

10

11

12

Q. But that may be the extent of it?

A. Yes.

13

14

15

16

Q. And that may or may not be very full and complete information?

A. Well, I think it is usually quite full if it is a new case.

17

18

19

20

21

Q. If it is a new case we may still be in the process of learning about the child, is that fair?

A. Yes.

22

23

24

25

Q. But that on-call cardiologist I take it is expected to make a valuable contribution to that child's treatment when he gets to the Hospital in the middle of the night?

A. Yes.

Q. And if he is so unfortunate as to have the child die, he is expected to be able



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to make a sensible contribution to the discussion
to the determination of the cause of death is he not?

A. Yes, he is.

Q. Can we look at this graph here
for a moment, it is Exhibit 125, the thing that looks
like an electrocardiogram gone crazy, is that fair?

A. Yes.

Q. You wouldn't want that kind
of arrhythmia would you?

A. No, definitely not.

Q. And Mr. Scott, with help from
you, explained to us what it is that the graph
reveals, or plots.

A. Yes.

Q. I take it, Doctor, this was
not prepared under your direction?

A. No.

Q. You have not checked it?

A. No.

Q. And indeed I would hope that
had you been responsible for it you would have
ensured its accuracy, would you not?

A. I would have tried but it
might have taken me a long time.

Q. It would indeed. Now, Dr. Rowe,



1
2 recognizing that you are not responsible for this,
3 I do not intend to take you beyond the area where I
4 think you are, you can reasonably help us. My focus
5 is going to be both literally and figuratively on the
6 bottom line of that graph.

7 Literally, because the bottom line,
8 the blue line plots as I understand it, death that
9 occurred on the cardiology wards, initially 5A and
10 subsequently 4A/B in the seven year period between
11 January 1976 and December 1982, that is your under-
standing too I take it?

12 A. Yes, it is.

13 Q. Now, Doctor, I want you to
14 know that I have asked for the names of the children
15 whose deaths are there plotted, because otherwise
16 there is no sensible way of verifying the accuracy
17 of the plotting.
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But I say to you it seems to me that there are discrepancies in an area that you and I may be expected to know something about, that is to say, the plotting of deaths in the epidemic period, and I wonder if you can help me. Certainly I tell you that the epidemic period numbers differ from those plotted by Dr. Gilmour-Bryson on the graph that you saw just before you began to give your evidence so long ago.

Now, time alone will tell which is accurate, but I think you can help me with the epidemic period. In June of 1980, January, February, March, April, May, June, one death is recorded, and that I think to be accurate, you will recall, I believe, that Laura Woodcock died on June the 30th?

A. Yes.

Q. And you are not aware of any other death on the ward that month, are you?

A. I cannot remember, no.

THE COMMISSIONER: Sorry, June, you say?

MR. LAMEK: June of 1980.

THE COMMISSIONER: Oh, sorry, Mr. Scott.

MR. SCOTT: I am just looking. I do not rise to speak.

THE COMMISSIONER: Where do I find June on this?



B.2

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MR. LAMEK: There is January, Mr. Commissioner, of 1980, January, February, March, April, May, June, reading up.

THE COMMISSIONER: And that is one death.

MR. LAMEK: And then if you take that across, that is at the level of one.

THE COMMISSIONER: I see.

MR. LAMEK: Q And then as we know, Dr. Rowe, there were five deaths on the ward in July of 1980 and the chart so records, does it not?

A. I think that is right, yes.

Q Yes, and again in August, you and I know that there were five deaths on the ward and the chart so records?

A. Yes.

Q Now, does the Hospital know something that you and I do not know, Doctor? I am only aware of two deaths on the ward in September, Gage on September the 2nd, Heyworth on September the 25th. Are you aware of any others?

A. May I just check that? I am not aware of others, but I ---

THE COMMISSIONER: In September two deaths in the ward so all these others are -- I think



B.3

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what they did, obviously, they must have included the
three that died in the operating room.

3

4

MR. LAMEK: Well, perhaps they did,
but the chart showing ward deaths appears to record
five in September, does it not?

5

6

A. Yes, it does.

7

8

Q. And to that extent, on our
understanding of it, it is incorrect?

9

A. Yes.

10

11

Q. In October, I think you and I
are aware of three deaths on the ward?

12

A. Yes, with one that was transferred
to the Intensive Care Unit.

13

14

Q. One died in the Intensive Care
Unit?

15

A. But it was a ward-related death.

16

17

Q. Ward-related, but there is a
separate line plotted for ICU deaths, is there not?

18

A. Yes.

19

Q. In fact, there were two deaths
on the ward, were there not?

20

A. Yes.

21

22

Q. I am sorry, we are talking about ---

23

A. I am sorry, in September?

24

Q. In September there were two, in

25



B.4

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October there were three, and the graph so shows. In

3

November there was but one, was there not?

4

A. Yes, that is right.

5

Q. That is Lutes on November 17, the
graph showing two in November?

6

A. Yes, that is correct.

7

Q. And to that extent, the graph
wrongly records the November deaths on the ward?

9

A. Yes.

10

Q. In December, if my memory serves
me, there were five deaths on the ward, were there not:
Onofre, MacDonald, Gosselin, Lombardo and Belanger?

12

A. Yes.

13

Q. For some reason that I do not
understand, the graph appears to show six in December.
Do you know of another death on the ward in that
month, Doctor?

17

A. No, there was an ICU death.

18

Q. And again, it appears the chart
is wrong with respect to December then?

19

A. That is correct.

20

Q. Now, in January of 1981 the
graph correctly shows just one ward death. I know of
no others and I take it you do not either?

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A. No.

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Q In February, it is my understanding that Fazio, Floryn and Thomas died on the ward. Are you aware of any others in that month?

A. No.

Q But unhappily the graph appears to suggest there were five in February?

A. Yes, I think they are counting the OR death.

Q And then in March, my understanding is there were nine deaths on the ward, and Pacsai of course died in the ICU. The deaths on the ward being those of Leith, Warner, Hines, Gionas, Manojlovich, Inwood, Gardner, Miller and Cook. You know of no others, I take it?

A. No.

Q Again, the graph seems to show eleven ward deaths in that month?

THE COMMISSIONER: I guess that is right, is it? I guess one can tell it a lot more easily on the big chart. It says eleven, does it?

MR. LAMEK: It is certainly above the ten line, Mr. Commissioner, but even if it were at the ten line it would be wrong anyway.

Q And Dr. Rowe, can we agree it is a lovely looking graph but in the nine-month period



B.6

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that you and I know anything about and with which we are particularly concerned in this Commission, it appears that the graph is wrong with respect to September, November, December, February and March?

A. Yes.

MR. SCOTT: Will the Commission Counsel permit me to call a witness to prove the graph or do I have to wait eight months for that?

THE COMMISSIONER: No, the graph can be proved, but what concerns me is not the graph. The graph fine. It is just the facts upon which it is based ---

MR. SCOTT: My friend is making an attack on the accuracy of the graph because he does not understand how it was compiled. I have undertaken to prove it, but the way the thing is run I will not be able to call a witness to prove it for many, many months. If Mr. Lamek wants me to call someone soon, I would be delighted to do so because he misunderstands.

THE COMMISSIONER: All right. Well, I do not see anything wrong with that if you and Mr. Lamek can work it out.

MR. LAMEK: I am perfectly content with that, Mr. Commissioner. If I misunderstood it is



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because I am afraid I took Mr. Scott literally. He told me that was a geographic line and referred to deaths in that geographic location.

THE COMMISSIONER: Well, if we are going to have Mr. Scott prove it by a witness, I think ---

MR. SCOTT: Well, what it comes to is in the epidemic period we have shown more deaths than actually occurred, so if the chart errs, and I do not concede it does, it errs in favour of the epidemic theory rather than against it. But I will be happy to prove it in due course.

MR. LAMEK: I will look forward to that, Mr. Commissioner.

THE COMMISSIONER: All right.

MR. LAMEK: Q Now, clearly Mr. Scott is right, Dr. Rowe, to the extent there are errors in the period that we know about, the errors are an overstatement of ward deaths, are they not?

A. Yes.

Q So there is clearly nothing sinister about the errors, if they be errors?

A. Yes.

Q And certainly in light of what you have told me about your non-responsibility for this, I am in no way asking you for an explanation or



B.8

1
2 a justification, but unhappily the graph was put in
3 through you initially, Dr. Rowe, and I have to ask
4 you, therefore, if you will agree with me that on the
5 face of it the numbers in the one small segment we
6 are able to check are less than accurate; does that
7 appear to be the case?

8 A. Yes, unless ---

9 MR. SCOTT: Well, Mr. Commissioner,
10 before the witness answers, I will not read it, I
11 simply draw my friend's attention to my statement
12 about how the chart was made up, which is found at
13 Volume 19, pages 3297 and 3298, which explains that
14 the data for the graph is based on the monthly death
15 reports which are compiled by the census control
16 clerk at the Hospital.

17 Now, in due course I will prove how
18 it is done, but my friend is busy and perhaps has not
19 absorbed the implications of that statement. But I
20 will be happy to discuss it with him when he has a
21 moment free.

22 MR. LAMEK: No doubt the error is mine,
23 Mr. Commissioner. I shall wait enlightenment on it.

24 THE COMMISSIONER: All right.

25 MR. LAMEK: It may become clearer to
you, Dr. Rowe, as well.



B.9

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2 In any event, let me look with you
3 at the bottom line in a figurative sense. Now, you
4 may recall, and Mr. Scott refers to pages, at page
5 3306 of Volume 19, Mr. Scott said this, Dr. Rowe,
6 beginning at line 19, Mr. Commissioner:

7 "This is simply presented so that
8 you will have a complete picture and
9 will not be obliged to look only at
10 one ward without relation to the
11 others."

12 Dr. Rowe, I want to examine that proposition with you
13 for a moment.

14 I take it you would agree that there
15 may be advantage derived from this graph assuming it
16 to be roughly accurate in that it enables us to see
17 the death patterns on the cardiac wards in the context
18 of the other death patterns in the Hospital?

19 A. Yes.

20 Q. Now, clearly the number of overall
21 deaths in the Hospital, that is to say, the black line
22 at the top, fluctuated dramatically in the period
23 covered by the graph, that is to say, through the
24 years 1976 through 1982?

25 A. Yes.

Q Fluctuated dramatically month to
month. As I read it, in February of 1979 there were



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some 41 deaths up here, dropping dramatically in March of 1979 to 18 or 19, up again to over 30 the following month, very dramatic swings in the overall death pattern in the Hospital; that is clear from the graph, is it not?

A. Yes.

Q. And the same is true on a slightly smaller scale of the 7G deaths, the brown line, is it not? They seem to move dramatically from one month to another? There is that period in 1979 where they jump up and down all over the place, and again through 1980 they're up and down, is that fair, fairly dramatic fluctuations?

A. Yes, the 7G deaths seem to show, however, some line of decline.

Q. Yes. Getting better at looking after small babies.

A. But I agree that it is fluctuating.

Q. Yes, the trend is down. I accept that over the seven-year period, but with substantial moves from month to month.

A. Yes.

Q. The ICU deaths, the yellow line curiously seem to be taking, if anything, a trend opposite to that of 7G, but nevertheless my point is



B.11

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fairly wide fluctuations from month to month, are they not?

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A. Yes.

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Q. And the same is true of the

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"All Cardiac" death line, is it not?

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A. Yes.

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Q. The "All Others", the purple line

9

jumps up and down month to month, and it is my suggestion to you, Doctor, looking at that graphic

10

representation of what is going on in different areas

11

of the Hospital that when you get to the bottom line,

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the "Cardiology Ward" deaths, there one has a situ-

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ation of contrast with the other lines, does one not?

14

A. Yes.

15

Q. Is it not fair that while the

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other lines go up and down, and I think I described it

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as an out of control EKG like that, the cardiology

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ward deaths from January of 1976 through to the

19

middle of 1980 putter along essentially between zero

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and three deaths a month. There is one month outside

21

the epidemic period, is there not, where there are

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four deaths occurring?

A. Yes.

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Q. And apart from that, the number

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varies between zero and three. Doctor, I promise you

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I am no better at counting than Mr. Scott is, but I ask you if you will accept my word for it because I would not put you to the test, that outside the nine-month epidemic period, there ^{are} is some 27 months with zero deaths on the ward, some 19 with one death, 23 with two deaths, 5 months with 3 deaths, and one with 4?

A. Yes.

Q. And does that sound like a reasonable distribution on the basis of your experience?

A. Of that, yes, I think so.

Q. Indeed, Dr. Rowe, is it not fair to say that by contrast with all the other mortality rates plotted on this graph, that of the cardiology wards has not, other than in the epidemic period, shown more than a minor month-to-month or even year-to-year variation?

A. I think that is quite true in numbers. The percentage change, because there are fewer numbers involved, may not look as gross a difference as it does on, say, "All Cardiac".

Q. I understand, Doctor.

A. But, you know, a jump from zero to three is a big jump in percentages.

Q. Yes, it is. Well, a jump from



B.13

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one to two is 100 per cent increase, but you would
not suggest that is a valid way of looking at it?

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A. Well, I think that if you say
the bottom line does not fluctuate like the other
lines, I would perhaps disagree, but I understand
your point, which is the numbers.

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Q. Yes. Well, how many beds are
there in 7G?

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A. I am not sure of the total
number on 7G, but it is about -- I think they have a
total on 7F and G of about 60 beds.

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Q. Half as big again as 4A/B?

A. Yes.

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Q. And what about the ICU?

A. I think it is about 14 or 15. I
am not sure.

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Q. 14 or 15?

A. Something like that, I think. I
am not absolutely sure.

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Q. Doctor, I am not surprised that
the numbers are very much higher than yours because
you told me, did you not, that frankly the ICU and the
neonatal ICU are places where you expect children to
die?

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A. Yes.



B.14

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Q But even there there is some considerable fluctuation, as we have agreed?

A Yes.

Q Certainly we can agree on this, I believe, that when July and August 1980 came around, the nurses on Wards 4A and B very quickly became upset about the number of deaths; we have established that, have we not?

A Yes.

Q They do not appear to have viewed the deaths in those months as just a normal fluctuation in the mortality rate on the ward, do they?

A No.

Q And fairly neither did you, did you, Doctor?

A No.

Q Now, Dr. Rowe, Mr. Scott also referred you to the increase of deaths in the ICU at about the same time as the epidemic period. Now, I tell you I have no way of checking the accuracy of the graph in that regard. Let us assume it is accurate and that the deaths which are shown as having occurred in the ICU did indeed occur there in the months shown. We have just said that the ICU is one of the places in the Hospital where one should



B.15

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expect to see high death rates, that is fair, is it
not?

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A. Yes.

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Q. The sickest patients and post-

operative patients go there?

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A. Yes.

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Q. And they go there from all over

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the Hospital, not just from the Cardiology Division?

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A. That is right.

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Q. May I suggest to you, Doctor, that any increase in the death rate in the ICU at the beginning of or during the epidemic period is probably not related in any way to your impression of a cluster of very sick cardiac patients?

A. Any increase in the ICU?

Q. In the ICU deaths, isn't connected in any way to your perception of what was happening on your ward, that is, a cluster of sick, very sick cardiac patients?

A. . Yes.

Q. Because in the period about which we're talking very few of your patients got to the ICU, did they?

A. That's correct.

Q. And therefore your sick patients weren't contributing to the ICU death rate unless they went there from surgery?

A. Yes.

Q. Now, an increase in the ICU deaths may reflect I suppose a higher incidence of very sick babies throughout the Hospital. That could be one of the reasons for a high death rate in the period, could it not?

A. Yes.



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Q. But it doesn't tell us anything about the severity of illness of your cardiac ward patients, does it?

A. No.

Q. And I take it, Doctor, that the hospital has no information of which you are aware that the increased ~~in~~ mortality in the ICU during our epidemic period was accompanied by any unusual time clustering of deaths?

A. I'm not aware of that.

Q. Now, we have just said that the very sick babies on 4A and B were not getting to the ICU unless they went via surgery in the epidemic period. Is that fair?

A. Yes, I think that is a fair statement.

Q. And that may reflect I suppose the availability of ICU beds to some extent?

A. Yes, I think it does.

Q. Yes. Now, I know that Dr. Freedom will talk about Baby Shrum in that context and his efforts to get her into the ICU, but other than that case, is it fair to say, Dr. Rowe, that for the vast majority of our 36 cases the deaths were so sudden that transfer to the ICU had not even been attempted?



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A. I can't recall. I think that probably is true, but I can't recall the exact numbers and we don't know in fact - at least I don't know in fact how many were discussed with that in mind.

Q. All right. You don't know of any others. You know of the Shrum case I take it?

A. Yes.

Q. Well, in that regard, can I take you to the question of the then proposed intermediate ICU?

A. Yes.

Q. And you have told us a good deal more about that in the course of your cross-examination and for myself I am glad to have a better understanding of what was to be involved in that. You told Mr. Ortved, and this, Mr. Commissioner, is found in Volume 21 beginning at page 3846 - I don't intend to read it unless Dr. Rowe tells me I've got it wrong. You told Mr. Ortved in the course of his cross-examination about the more sophisticated monitoring equipment and the higher nurse/patient ratio that would be available in the intermediate ICU. I take it that was monitoring of ^a ~~the~~ kind and sophistication that was not available generally on the wards?



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A. That's right.

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A. Yes.

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A. Yes.

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A. No. (1)

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Q. But would one not expect, Doctor, that having to make do with the ward environment for his patient he would certainly take any and all measures available to him to ensure the closest possible



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attention to that child's condition and progress?

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A. Yes.

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Q. He would require the baby to be on a cardiac monitor of the kind available on the ward?

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A. Yes.

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Q. Perhaps might require the child to be on an apnea monitor. They were available on the ward, were they not?

10

A. Yes.

11

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Q. He would want to order enhanced levels of care, constant or shared nursing care for the child?

13

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A. Yes.

15

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Q. Getting to that one-on-one nurse/patient relationship that prevails in the ICU?

17

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A. Yes. I don't think you can get one-on-one easily on the ward.

19

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Q. That's what he would want, isn't it?

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A. Yes, that's what he would like.

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Q. And we know that a few children during the epidemic period did have constant care ordered for them and it was provided to them?

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A. Yes. I am not personally sure how often they got one-on-one regardless of what the order was because I know that the nursing view was that one-on-one or constant care equals ICU.

Q. Well, okay, we are going to have to look at the nursing records and speak to someone like Nurse Radojewski about that?

A. Yes.

Q. That's your understanding in any event?

A. Yes.

Q. But in short, Doctor, let us talk about an ideal world if there were one and it would include ^{an} intermediate ICU, I suppose. ^{That} it's not that ideal. Lacking an intermediate ICU, if a cardiologist in the epidemic period couldn't get his patient to the ICU because the ICU had no space, he couldn't get it into an intermediate ICU because there wasn't one, we would expect to find that he would want to ensure that on the ward he would have that baby under the closest possible supervision?

A. Yes.

Q. And the example that was expressly put to you in cross-examination was that of Baby Estrella. Do you remember that?



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A. Yes.

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Q. You were asked by Mr. Strathy

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whether the fact that constant nursing care for Baby

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Estrella suggested that her physician was concerned

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about her condition and prognosis. Do you recall

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being asked that?

A. Yes.

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Q. And you said that it did indeed

9

so suggest?

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A. Yes.

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Q. Doctor, I suggest to you that

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the converse may also be true; that is to say, that

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if no enhanced level of care and attention is ordered

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for a child, that may indicate that the treating

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physician does not have an immediate concern about

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the patient's short term prospects of survival?

A. Yes, that may be true.

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Q. I recognize the fact that the

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intensive care is not provided may mean it is not

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available; it may also mean that it wasn't thought to

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have been necessary, may it not?

A. Yes, it may.

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Q. Because if the treating

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physician had such an immediate concern for the short

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term progress of his patient, one would expect him to

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2 do whatever he could with whatever was available to
3 ensure closest attention, wouldn't one?

4 A. Yes.

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5 Q. Now, you told Miss McIntyre
6 in cross-examination that when the cardiology ward
7 moved from 5A to the fourth floor in April of 1980
8 there was an increase in the nursing complement?

9 A. Yes.

10 Q. Do you remember telling her
11 that?

12 A. Yes.

13 Q. There were to be four additional
14 beds in the new ward and, indeed, the infant beds
15 were to increase by the four, were they not?

16 A. Yes.

17 Q. How many nurses were added
18 at the time of the move, Dr. Rowe?

19 A. I don't know.

20 Q. Were nurses added for both
21 day and night shifts?

22 A. I don't know.

23 Q. I thought you told Miss
24 McIntyre ---

25 A. All I know is that there were
nurses added at the time of the transfer to cope with



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the additional beds and so on.

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Q. All right. Was an increase in the nursing complement discussed in the course of planning the move to 4A and B?

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A. Yes, I think it was. I think that was part of the ...

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Q. And I would take it that representatives of the nursing staff of the Hospital had been involved in those discussions?

10

A. Oh, yes.

11

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Q. Yes. Do you recall how many new nurses were requested for the move?

13

A. No.

14

Q. Or how many were approved as opposed to actually added?

15

A. No, I don't.

16

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Q. Okay. And you have told me you don't know how many were actually added?

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A. No.

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Q. May I just digress for a moment there, Doctor. I was interested by something you said either yesterday or the day before about the reporting system with nursing. I rather got the impression that there were two discreet reporting or communication channels in your division, and it



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2 may be true of the whole Hospital; one through nurses
3 and the other through physicians?

4 A. Yes.

5 Q. And if a nurse has a complaint
6 or a concern or a question about something that is
7 going on in the ward, to whom would that be addressed?

8 A. It depends what the complaint
9 concerns. I think in general nursing tended to mind
10 their own shop as it were.

11 Q. Yes.

12 A. They looked after their own
13 things internally. If it was something that arose as
14 problems, say, between nursing and the physicians,
15 then the head nurse would speak to either the ward
16 chief of the moment or to Dr. Fowler or to myself.
17 Something that could be resolved locally that they
18 thought was a matter that involved the phsyician
19 group.

20 Q. Yes.

21 A. But for things that involved
22 nursing alone they would not consult us on that sort
23 of thing.

24 Q. I take it then the progression
25 would be, from the example you gave, the nurse
involved in the particular problem with a doctor to her



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head nurse?

A. Yes.

Q. Head nurse to ward chief.

That would be likely the progression?

A. Something in that order, yes.

Q. What about the physician side of it. If there is a cardiac fellow or a resident who has a complaint or a concern or an unhappiness about something on the ward, to whom does he address his concern?

A. Well, he might address that to the head nurse himself.

Q. Yes.

A. Or he would presumably in many cases speak to the ward chief. If it was something of a very major nature it would filter back to me.

Q. Well, the reporting ^{and} communications channels are always a bit interesting, Doctor, thank you for that.

The move to Ward 4A was effected on April 1, we know that. You said in the course of I believe cross-examination by either Mr. Scott or Mr. Ortved that the reason for that move, or one of the reasons was that you had on 5A perceived a growing



Rowe, re.dr.
(Lamek)

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12 2 need for more infant accommodation. Is that fair?
3 A. Yes.
4 Q. You had observed I take it
5 an increasing pressure towards ^{admit} ~~towards~~ very young babies to
6 your cardiology ward in larger numbers than you had
7 previously had?
8 A. That was true I think.
9 Q. But I take it when Ward 4A/B
10 opened in April the demand for those infant beds
11 continued, as you projected it would?
12 A. Yes.
13 Q. And more very young babies
14 were admitted to the ward, you now had facilities
15 for rather more of them?
16 A. Yes.
17 Q. How soon after April 1st,
18 1980, were the additional infant beds being put to
19 regular use?
20 A. I imagine fairly soon after-
21 wards. I am not sure because in the cross-over there
22 was some change in the admission patterns I think, but
23 I think babies probably kept on coming.
24 Q. Okay. Doctor, you have told
25 us of your impression that in the epidemic period
you were seeing a large number of sicker younger babies?



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A. Yes.

Q. And sicker you attributed to a cluster of very serious cardiac malformations?

A. Yes.

Q. Younger, I take it, reflects in part the increased accommodation available now for younger babies after the move to 4A/B?

A. Yes, I think so.

Q. But is it not fair, Doctor, that in the three months preceding the start of the epidemic period and three months following the availability of these additional infant beds, there did not appear to be any increase in on-ward mortality?

A. Yes.

Q. Indeed, do you recall, Doctor, my information is, and I hope you can confirm it for me, that in the period from April 1 to June 30 there were three deaths on 4A/B?

A. I'm not sure.

Q. Indeed, one of them may not have been on 4A/B because it occurred on April 1st, the day of the move.

A. Yes.

Q. A 15 year old child called Kim Turnbull, do you remember that?



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A. No, I don't.

Q. You have no reason to think that may be inaccurate information though I take it?

A. Oh, no.

Q. Later in April a four and a half year old child called Eckens died on the ward. Do you have any recollection of that?

A. No, I don't.

Q. And the information that I have is that the only other death in that three month period was that of Laura Woodcock on June 30th, and of course she is one of the children we are looking at here.

A. Yes.

Q. And if that information be accurate, Dr. Rowe, it appears, does it not, that only one of those three deaths was an infant, Laura Woodcock?

A. Yes.

Q. And her's is one of the deaths under investigation?

A. Yes.

Q. And does it not appear fair to say that the move to 4A/B, the increase in the number of beds, the increase in the number of infant beds,



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presumably the addition of some nurses new to the
cardiac ward, all those things don't appear to have
generated in the first three months at least any
noticeable increase in on-ward deaths?

A. No.

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Q. And in particular no increase
in on-ward infant deaths?

A. That is right.

Q. Now, Mr. Scott spent some
time with you discussing fourteen possible causes of
cardiac arrest which might be accompanied or pre-
ceded by some or all of the terminal events that you
and I had earlier referred to in referring to the
records of the 36 babies.

I am sure you recall that exchange
with Mr. Scott?

A. Yes.

Q. Do I understand it correctly,
Dr. Rowe, that the fourteen causes; that is, they
~~fit~~ ^{sound} like a Chicago 15 but, basically, the causes ~~is~~ ^{are}
14. The fourteen causes or conditions included most
or all of the conditions that beset one or more of
the 36 children with whom we are concerned?

A. Yes.

Q. Each of those 36 children
whom you and I reviewed suffered from one or more of
these fourteen so-called causes or conditions, did
they not?

A. Yes.

Q. And that is set out in the
two graphs that were marked yesterday, I think?



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A. Yes.

Q. Dr. Rowe, you will recall that when I examined you in chief, I asked you, I think - and I hope with respect to each one of the 36 deaths - whether, in your judgment, the death of the child and the time and manner of the child's dying were consistent with his cardiac anatomical defects and his clinical condition?

A. Yes.

Q. And you said that the deaths, in your professional view, were so consistent?

A. Yes, with one or two exceptions.

Q. Yes. I took that to mean, Dr. Rowe - and tell me if I was wrong - that, in your opinion, the death and the particular terminal events described in the record, the manner of their onset, the speed of their progression, all those things were consistent with the plaintiff's clinical condition taken as a whole?

A. Yes.

Q. Each of these conditions, if it was applicable to the child, being taken into consideration?

A. Yes.



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Q. That is what you meant?

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A. Yes.

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Q. And if that condition included,

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for example, hypoxia or anemia or any of these things

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that we heard about from Mr. Scott, apnea or any

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of those things, that was considered by you in giving

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your view as to the consistency of the death picture

with the clinical conditions?

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A. Yes.

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Q. And, therefore, I hope I

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have this right, the fourteen causes that Mr. Scott

12

took you through are not additional causes over and

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above anything we have discussed so far, are they?

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A. No. They are the whole

picture.

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Q. They are part of that whole

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picture, which I correctly understood you to have

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taken into account when considering the death

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pattern and the child's clinical condition?

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A. Yes, that is correct.

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Q. They are a list of the

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matters, problems, difficulties, conditions that

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were subsumed under that heading, the clinical

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condition of this child, that child, that child, were

they not?

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Q. And in terms, therefore, of possible explanations of the deaths of these 36 children, is it not true to say that the only two causes that have yet been advanced to date for the deaths of these children, with the exception of Velasquez, are either the clinical condition of the child, including such of these matters as may be relevant, and digoxin intoxication?

A. That is correct, yes.

Q. And the fourteen causes have not broadened the scope of those possible explanations, have they?

A. I think that they may emphasize the contribution of several things to the total clinical picture, that is right.

Q. And in light of that, we are still in the position, are we not, doctor, in your expert opinion, that in almost all of these 36 cases, the most you can say is that it will, if one focuses upon the death and the manner of dying, in almost all cases, the events there are consistent, both with death as a result of the clinical condition and heart deformities -- I'm sorry, either that or digoxin intoxication?

A. Yes.



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Q. Now, with respect to these fourteen conditions, doctor, I take it that it is not a unique situation that these 36 children should suffer from one or more of these problems?

A. No.

Q. Your patients, I take it, on the cardiac ward commonly display symptoms of respiratory problems, hypoxia and all the things that Mr. Scott took you through?

A. Yes.

Q. Perhaps not all of them with frequency but most of them?

A. Yes. Some more than others and, of course, in this particular group, more of these variables are involved with very small babies.

Q. Yes. But the conditions and, indeed, even the combination of conditions is not peculiar to this particular nine-month time period, is it?

A. No.

Q. And indeed, doctor, at the end of the day, if it could be shown that, for example, Justin Cook had, if it were possible to have them, each and every one of these fourteen conditions simultaneously and concomitantly --



D6

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A. Yes.

Q. -- and if it could be shown
that his ~~congestive~~ ^{congenital} heart defect was so severe that
his survival for more than the next few days couldn't
be confidently predicted; given all that, it still
wouldn't change your opinion as to the cause of
that child's death, would it?

A. No.

Q. Can we turn now to something
else that was raised by Mr. Scott; that is, the
New England Regional Study, and that is Exhibit 126,
Mr. Commissioner.

Perhaps, Mr. Registrar, we can have
a copy for the witness. Do you have an extra copy
for the witness?

THE COMMISSIONER: No. I think it
is more important for the witness.

MR. LAMEK: Thank you, sir.

Q. Now, the thing that parti-
cularly interested me here, Dr. Rowe, is the
category of what are called "determinants of survival".
I suppose, putting another cast on that same set of
features, one could equally well call them "risk
features", couldn't one?

A. Yes.



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Q. The risk features for
children with congenital heart disease.

Now, first with respect to Exhibit
126 generally, the study was published in February of
1980, Dr. Rowe.

A. Yes.

Q. But I am right, am I not, that
the data on which the detailed analyses are based
are from the period July 1968 to June 1974?

A. Yes.

Q. Now, there ^{are} ~~is~~ some data, I
know, from 1974 to 1977, but the ones upon which the
detailed analyses are based are 1968 to 1974.

A. I think so, yes.

Q. ~~Unless~~ ^{lest} there be any question
about it, at page 384 I believe that to be stated,
the lower half of the right-hand column:

"At the time of this writing data
about any RICP patients was available
through June 1977. Nonetheless, it
was decided to limit this review to
the patients admitted to the study
between July 1968 and June 1974."

A. Yes.

Q. The most recent data, therefore,



D8 1
2 in this study, not subject to detailed analysis, but
3 the most recent data are six years old and the data
4 upon which the detailed analyses are based are, I
5 take it, anything up to nine years old?
6 A. Yes.
7 Q. Indeed, they are at least
8 nine years old and may be, up to 1968, fifteen years
9 old; is that fair?
10 A. Yes. They are now.
11 Q. They are now, yes.
12 A. Yes.
13 Q. We will take two years of
14 those numbers, if you like. If you are trying to draw
15 an analogy with 1981, would it greatly affect the
16 point I am making, doctor?
17 A. No.
18 MR. SCOTT: What is the point my
19 friend is making?
20 MR. LAMEK: The doctor has seen it
21 and we will explain it to you, Mr. Scott.
22 MR. SCOTT: I don't understand the
23 point.
24 MR. LAMEK: If you sit down, you will.
25 MR. SCOTT: If you go on, you see
why the clinic selected deaths from that period, because



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they had been followed for a period following that.

MR. LAMEK: Yes, I know.

Q. We are agreed, are we, doctor, that data subject to close analysis are those up to 1974?

A. Yes.

Q. Now, I take it "determinants for survival" are not fixed and engraved in stone for all time, are they?

A. I wouldn't think so. They would be subject to further analysis when more numbers and time passes and so on.

Q. Indeed, conditions may change so as to affect the determinants of survival?

A. Yes.

Q. Let us take an extreme example, doctor. I take it, at one time before commercial air transport was readily available everywhere, the proximity to a hospital would have been a real determinant for survival, wouldn't it?

A. Yes.

Q. And the development of new surgical techniques and procedures, again, is a determinant of survival, is it not?

A. Yes.



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Q. And that is acknowledged in
the report itself at page 407, I think?

A. Yes.

Q. Where, at the top of the
left-hand column, they say:

"Perhaps the assigned Outlook
Category 3 for transposition of
the great arteries was too gloomy.
These infants may belong in Cate-
gory 2 since the outlook towards the
end of the study period was
significantly better than at the
beginning."

A. Yes.

Q. In other words, your skills
in cardiology are constantly improving, you are
getting new techniques dealing with children, and
one would expect these determinants to shift a little
over the course of time, would you not?

A. Yes.

Q. And is it fair, therefore,
that in looking at data seven, eight and nine years
old, one has to have a little caution in making sure of
the continued applicability of the conclusions that
were then reached?



Rowe
re.dr. (Lamek)

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A. Yes.

Q. Now, I want to look at two particular determinants for survival that are referred to in this report, determinants for survival or risk factors.

The first is low birth weight, and you will remember that we discussed that with Mr. Scott. It is referred to at page 407 of the report, the lower right-hand side of the page, and over on to page 408.

You have noted, as I recall your evidence, doctor, that the definition, if you will, of low birth weight used in the New England Regional Study was 2500 grams.

A. It was 2000.

Q. I'm sorry, 2000 grams.

A. Yes.

Q. You, I think, would have preferred to see 2500 grams as a cutoff point for low birth weight?

A. That was our clinical impression, yes.

Q. And, indeed, in doing your own application of the New England Regional Study risk factors --



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A. Yes.

Q. -- 2500 grams is the cutoff point you took for low birth weight, wasn't it?

A. We did, yes.

Q. Now, I am interested in your scoring of the 36 children on a modified New England Regional Study basis, if you will, and that is Exhibit 127.

Do you have a copy of that?

A. Yes, I have a copy of that.

Q. With respect to birth weight, can you help me with one thing that I recall you said in the course of one or other of the cross-examinations. I think you said that, in the first weeks of life, a baby is getting back to its birth weight. Do you recall saying something like that?

A. Yes.

Q. Would you explain what you mean by that.

A. Well, babies lose some weight immediately after birth and then it takes about ten days for a term baby to regain birth weight.

Q. Does it take longer for a premature baby?

A. It takes longer for a pre-term



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baby and it takes longer for a small gestational
age baby.

THE COMMISSIONER: I'm sorry, did
you say it takes longer for a premature baby? Do
you mean it would regain the weight it should have
had or the weight it did have?

THE WITNESS: No, the weight it did
have, Mr. Commissioner.

THE COMMISSIONER: So, a premature
baby loses more weight, does it?

THE WITNESS: Well, it loses weight.
I can't tell you how much more it loses than the term
infant, but it does lose weight in the same way but
it is more difficult to get it back.

MR. LAMEK: Q. One would expect
a baby at three or four days of age to weigh less
than at the time of his birth?

A. Yes.

Q. Now, doctor, did you search
out the birth, or I have to say the neonatal weight
of these babies in Exhibit 127?

A. Yes. I am not sure, I think
I got all those from the hospital records, but I may
have got them from some other sources.

Q. Doctor, I am obliged to say



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I believe there to be a number of errors in the birth weights.

A. I would accept that possibility.

Q. Doctor, let me be more specific. Of the 36 cases, it is my understanding - and I will look at them with you - that eight of the children have their birth weight misstated by 100 grams or more. I am not talking about minute differences.

A. Well, they are not put in grams in most cases, Mr. Lamek.

Q. No.

A. They are put in --

Q. Pounds and ounces?

A. They are put in kilograms, and that doesn't allow you the advantage of a 100 gram difference.

Q. I am sorry, I don't understand that, doctor.

A. Well, it allows you the difference of 99 grams but not 2.5, because it is true that, in birth weight, people tend to put 3350 grams or something like that. For the purposes of this graph, I believe that what I did was shorten



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it to the simplest decimal point.

Q. Doctor, you did, but not in all cases, and I confess the first one was the one that first made me question these birth weights, and it is that of Cook, where you have taken it to two places of decimals but recorded a birth weight of 5.36 kilograms. That is an extraordinary bouncing baby boy, was it not?

A. Yes.
That is an obvious error.
That is, I don't think that's right. I don't think it could have been 5.36.

Q. I assure you it wasn't, doctor. The Cook chart discloses, at page 11 --

A. That's 2.5?

Q. I wish I could be that helpful to you, doctor. Page 11, the past history sheet taken at the Hospital for Sick Children, his birth weight is recorded as 6 lbs.



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A. Yes. Well, I would simply -- in patients where it was recorded as pounds, I would translate that into kilos.

Q. At what conversion number?

A. 2.2.

Q. Sorry?

A. 2.2.

Q. 2.2. Obviously you did not convert that one at 2.2; pounds to the kilogram?

A. No. I am not sure why that is ---

Q. Well, Doctor, if I tell you that at a conversion rate of 2.2, 6 pounds becomes 2720 grams. There is not very much relationship between that and 5360 grams?

A. No, there is not. I will accept your 1.7.

THE COMMISSIONER: It is not far out from being just one half, though, is it?

MR. LAMEK: Close but no cigar, Mr. Commissioner.

THE COMMISSIONER: Well, no, I suppose that is right. But it is not that far away from one half.

MR. LAMEK: Q. Doctor, I am prepared



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3 to go to the chart in every one of these cases, but
4 may I tell you that my checking, and I invite you to
5 look yourself over the lunch break, I will give you
6 the page references ---

7 A. Surely.

8 Q. --- are that the Fazio
9 weight, which you have recorded at 2.6 kilograms
10 is in fact 2860 grams at page 4A of the chart.

11 A. Is that 2.8 instead of 2.6?

12 Q. The information is there in
13 grams, I believe. You did not have to do a conver-
14 sion with that one.

15 The Gionas weight, which you have
16 recorded at 2900 grams is in fact almost 3100 grams,
17 3,090. The Heyworth weight, which you have recorded
18 at 2.7 kilograms, is in fact 4700 grams; Hines, on
19 the next page, over 4000 grams rather than 3700;
20 McKeil over 4100 grams rather than 3800.

21 THE COMMISSIONER: I am sorry, what
22 was it? What is the weight?

23 MR. LAMEK: McKeil is 4140 rather
24 than 2800.

25 THE WITNESS: 3800.

THE COMMISSIONER: 3800.

MR. LAMEK: 3800, yes. Perreault ---



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THE COMMISSIONER: One great advantage we have of the metric system is we can convert it precisely to 4.14 kilograms.

MR. SCOTT: Is there any other advantage?

THE COMMISSIONER: Well, maybe after a while when you and I -- well, I should not put you the same category, but after we are gone ---

MR. LAMEK: Q. Then, Doctor, Perreault's birth weight you overstate it by 100 grams. I want to tell you his was 3400. That is found at page 3 of his chart.

THE COMMISSIONER: Perreault is?

MR. LAMEK: 3400, 3.4 kilograms.

Q. Now, there were three, Doctor, that you have labelled NK, which I take it means not known, you could not find them in the chart?

A. I could not find them, no.

Q. Well, I have got some good news for you then, Doctor. Floryn, whose weight is found at page 37, not that it matters greatly since he survived to 19, but nevertheless, it is recorded at page 37 in the record at 3,061 grams.

THE COMMISSIONER: 3,061. So that is 3.06?



Rowe, re-dr.
(Lamek)

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MR. LAMEK: 3.06.

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Q. Monteith is recorded at page

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7 of his record, 3.4 kilograms; and Woodcock is also

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stated, it is among the referring Hospital information,

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at 3.55 kilograms. I am sorry, that is at 12 days of
age.

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A. So that does not count.

8

Q. Pardon?

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A. That cannot count.

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Q. She was losing weight, if

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that is of any assistance to you, Doctor.

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A. No, but we are looking at

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birth weight, Mr. Lamek.

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Q. All right. Did you find 3.55

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in the Woodcock chart?

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A. I think there was a weight

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in there, but I could not find a birth weight anywhere
there.

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MR. SCOTT: As Mr. Lamek has found this,

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did he find anything for -- maybe he is coming to it --

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Miller? That is also marked unknown.

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MR. LAMEK: No, I could not find a

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Miller one.

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MR. SCOTT: And could my friend,

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having done this work, tell me if he agrees

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E4



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substantially with the other birth weights?

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MR. LAMEK: Yes, except one, and
it is only of significance because Lombardo is just
below your cutoff point of 2500 grams.

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THE WITNESS: Yes.

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MR. LAMEK: Q. The weight that
I have been able to find for her, Doctor, is 2500
grams. So she is right on the line, and indeed,
if I go to your next exhibit, she is not birth
weight less than 2500?

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A. Yes.

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Q. Now, Doctor, that sounds
awfully nit-picking and difficult, but is it not
fair to say that if one is proposing to form some
judgment or medical opinion as to the condition and
prognosis of children, that one should be as
scrupulous as possible to have the exact information?

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Q. Even though in many of these
cases this particular piece of information is not
going to have a bearing because very few of these
children could be considered low birth weight children?

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A. That is right.

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Q. It is nevertheless important
to have the best information possible, is it not?



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A. Yes, it is.

Q. You see, I am concerned when we come to Exhibit 158, and perhaps you can look at that now.

MR. SCOTT: I just want to get sure we are on a search for the truth here, that we have the same information base, and it may be that Mr. Lamek is not able to tell us yet, but was he able to check the accuracy of our information with respect to the other columns that are shown on Exhibit 127. He may not be able to say yet.

MR. LAMEK: No.

MR. SCOTT: Because if the Commission has corrections there, I think in due course it would be most helpful to have them.

MR. LAMEK: Well, I am sure it would. One would hope that would not be necessary.

MR. SCOTT: Well, no, but this is a complicated exercise and if there are cases where -- we want to have the same information base so the Commission can act on it, and if my friend has complaints about the other columns, I would be delighted to hear them so we can correct if necessary.

MR. LAMEK: Mr. Commissioner, I do not conceive it to be my sole role in life to check



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information prepared and submitted by the Hospital.
If in the light of this he wants to reconsider the
information and resubmit it, I would be delighted.

Q. Dr. Rowe, could we look at
Exhibit 158, which puts together the various 14 causes,
as it were, and one of those is low birth weight, it
is the sixth column from the left after the name
column, and it indicates low birth weight less than
2500 grams. And Doctor, I have to say it seems to
me that that column of Exhibit 158 compounds the
birth weight errors that I believe to exist in
Exhibit 127?

A. Yes, there is an error.

Q. Indeed, there are some
children recorded as having low birth weights there
who are not so identified on Exhibit 127, are there
not?

A. I think the numbers do not
add up, I agree.

Q. Well, happily, Doctor, as I
say, I happen to have selected a determinant of
survival or a risk factor that does not come into
play very much here, but certainly it comes into play
rather less than one would think by looking at
Exhibit 158, does it not?



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A. Yes.

Q. By my count, Doctor, the number in the total column under low birth weight should be 5, not 8. I take it to be that less than 2500 grams means less than 2500 grams?

A. Yes. I think that was -- well, it was supposed to be equal to or less than 2500 grams, but still, I do not know that that explains that.

Q. Well, it makes Lombardo a difference then?

THE COMMISSIONER: Sorry, it may well be if you use the new figure, but does it not add up to 8?

MR. LAMEK: Well, it does, Mr. Commissioner, but unhappily if you look at Fazio, Fazio is wrong even on Dr. Rowe's numbers.

THE COMMISSIONER: Yes.

MR. LAMEK: Because Fazio is shown on Exhibit 127 as 2.6 kilograms at birth weight, and so is Gage.

THE COMMISSIONER: Yes, I understand that, and Gionas is also.

MR. LAMEK: Well, Gage is 2.5.

THE WITNESS: Gage is 2.5.



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THE COMMISSIONER: Yes, I am looking in the wrong column. So that is 2, and then ---

MR. LAMEK: And Lombardo is, I believe, exactly 2500, but apparently the heading does not mean -- is not intended to say less than; it is supposed to say 2500 or less.

THE COMMISSIONER: Well, there is nothing wrong with the addition of 8. It is just that some of them should not be included.

MR. LAMEK: The addition is right; the inclusions are wrong.

THE COMMISSIONER: All right.

MR. LAMEK: Q. Doctor, you understand my intention is not to embarrass you, but I think we have to have a reasonable assurance that the information upon which your opinions are based is accurate, that is, they are not unreasonable expectations?

A. No, that is reasonable.

Q. Now, in fact, Doctor, if one were to look at the New England Regional Study, only one child of the 36 here, that is to say Dawson, had a birth weight of less than 2,000 grams?

A. Yes.



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Q. And even taking your preferred cutoff number of 2500, there are only four below that number and you would add back, I take it, Lombardo at exactly 2500 and -- who is the other one -- Gage at exactly 2500?

A. Yes.

Q. Making six.

MR. SCOTT: Sorry to interrupt again, Mr. Commissioner, but before the break, could my friend give us the page numbers where he found these birth weights so that we can check them out.

THE COMMISSIONER: Yes, all right. I do not know, can that be done readily, Mr. Lamek?

MR. LAMEK: Do you want me to take the time to do it now?

MR. SCOTT: Or just ask Miss Cronk to give me a list of them.

MR. LAMEK: Well, Cook is on page 11 of the chart, Fazio page 4A of the chart, Gionas page 7 of the chart, Heyworth page 12, Hines page 3, McKeil page 9, Perreault page 3, Floryn page 37, Monteith page 7, and Woodcock, and the Doctor will not accept 3.59 and I understand why, that is a 12-day old weight, and Lombardo page 3, Mr. Commissioner.



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MR. ORTVED: Can you just give me
Fazio again, please?

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MR. LAMEK: 4A.

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THE COMMISSIONER: Could you give
me, since everybody else wants some information,
could you give me the four others that were between
2,000 and 2500 grams?

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MR. LAMEK: Who were less than
2500, Inwood at 2470, Lutes at 2400, MacDonald at
2100, and Volk at 2280.

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THE COMMISSIONER: At what stage,
what weight do you treat a child as being premature?
It used to be the case, at any rate, that a child,
regardless of whether it was born prematurely, was
classed as a premature child if it were under a
certain weight; am I not right?

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THE WITNESS: No, you are correct,
Mr. Commissioner.

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THE COMMISSIONER: What is that
weight?

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THE WITNESS: 2500 grams.
THE COMMISSIONER: 2500. So any
child, I take it, that is born in a hospital who
weighs under 2500 pounds is treated as premature and
put in the premature ward?



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2 THE WITNESS: 2500 grams, yes.

3 MR. OLAH: I am sorry,

4 Mr. Commissioner, we could not hear that exchange
5 back here.

6 THE COMMISSIONER: I was just
7 asking what is the arbitrary weight in which the
8 hospitals treat babies as premature whether they are
9 premature or not, and that figure appears to be 2500
10 grams.

11 MR. OLAH: Thank you very much.

12 MR. LAMEK: Q. Doctor, I recognize
13 that failure to thrive may have been a more common
14 problem with these children than low birth weight was,
15 and I recognize that that itself is a serious
16 consideration in assessing condition?

17 A. I think I have said before
18 that I regard that as even more important than the
19 birth weight.

20 Q. But low birth weight per se,
21 I suggest, does not appear to have been a significantly
22 (?) distributed problem with these children?

23 A. No.

24 Q. Now, extracardiac malformation
25 is another determinant of survival, according to the
New England Regional Study, and Doctor, recognizing



1
2 that you conservatively characterized as "moderate"
3 cases of Down's Syndrome ---

4 A. Yes.

5 Q. --- it appears, does it not,
6 that extracardiac malformations do not operate
7 as a determinant of survival among our group on the
8 basis of the findings of the New England Regional
9 Study?

10 A. No.

11 Q. Because the New England
12 Regional Study, at page 408, concludes that only
13 severe extracardiac anomalies were directly
14 associated with survival, and on your scoring on
15 Exhibit 127 of the severity of extracardiac malforma-
16 tions, there were no scorings of severe, were there?

17 A. No.

18 Q. Doctor, may I take it that
19 although the categories of severity into which
20 particular congenital heart defects may be placed
21 may change as time progresses, nevertheless the
22 major determinant of survival in children in your
23 ward, the major determinant is their cardiac
24 deformations; ~~is that not~~ the anomaly that they
25 manifest?

A. The anomaly and I think their



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size and age.

Q. And Doctor, I am obliged to suggest to you, since we are looking at risk factors, and I promise you I do not do this facetiously, if some one or ~~two~~ more persons were engaged upon a course of administering dangerous drugs deliberately to children on a cardiac ward, that too would be a risk factor to be considered in considering their prospect for survival, would it not?

A. Yes.

Q. Yes. Can we look now at Exhibits 129 to 132.

Mr. Commissioner, I am going on to something else. It is 25 past 11:00. Is this a sensible time to break?

THE COMMISSIONER: Yes, all right. Let us take 20 minutes, then, until a quarter to 12:00.

MR. LAMEK: Thank you, sir.

---Short recess.



BmB.jc
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--- Upon resuming:

THE COMMISSIONER: Yes, Mr. Lamek.

MR. LAMEK: Thank you, sir.

Q. Dr. Rowe, I'd like to move now if I may please to Exhibits 129 and 132. As I understood your evidence when Mr. Scott was cross-examining you and when these charts were marked, you plotted, under the several headings, the information, some of which reflects the determinants of survival based on the New England Regional Study and then other matters as well and then came to a classification or a scoring first upon the basis that was used for the purposes of Dr. Bain's report and then second, under what is called a Scott classification in terms that we can more easily understand: low, high and inevitable.

A. Yes.

Q. And, Doctor, I ask you again, because I'm interested in the information under the heading "Electrical Mode of Death", and ask you once again, did you examine the charts for the indications of bradycardia and fibrillation?

A. Yes, I did.

Q. I will need your help with some of them. The first one on Exhibit 129 is Perreault.



F.2

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Mr. Registrar, could we have the witness copy of
the Perreault medical record, please. It is Exhibit 58.

4

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Now, Perreault was a child for whom it
had been decided there would be no resuscitation
effort, was there not?

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A. Yes.

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Q And it may therefore be that the
detailed account of his terminal events and the
precise manner of his dying is not as clearly set out
in his record as it would be in the case of a child
for whom there was a resuscitation effort made. I
understand that correctly, do I?

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A. Yes.

Q Could you tell me first, please,
where you find the reference or found the reference
in the Perreault chart to bradycardia or whether that
was an inference that you drew from the chart. I
should tell you that the record as to what happened
at the time of death is found on page 43, but it may
be that you have found a reference somewhere else?

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A I think that the reference there
is that the monitor showed occasional ventricular
activity, which means that there must have been - that
is bradycardia, just was occasional QRS complex and
there wasn't fibrillation there, so, I assumed that
that was a bradycardic death.



F.3

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Q. Are you satisfied that the rather vague expression "occasional ventricular activity" does not mean of a fibrillation kind?

A. Oh, yes, yes.

Q. You are satisfied with that?

A. Yes.

Q. And you infer from it that there was therefore bradycardia?

A. I think that means there was bradycardia.

Q. Okay, I'm content with that.

On the next page of that exhibit, 129, the Heyworth child -- I'm sorry, before we go to that, could we look at Shrum on page 1.

There, my only question is with respect to the notation that there was no fibrillation and I don't challenge it, I just want an explanation, if I may please, Doctor.

At page 42 of the record there is a note headed Arrest Note, 9880, and I don't know whether that is the source of your information as to the Shrum child or whether there was some other?

A. I think that is.

THE COMMISSIONER: What page?

MR. LAMEK: Page 42, the arrest note is the source of your information?



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THE WITNESS: I think so.

MR. LAMEK: Q. Certainly that records that at 1900 hours the patient became bradycardic and developed CHB, is that correct?

A. Complete heart block.

Q. Complete heart block with varying ventricular rates from 90 to 150?

A. Yes.

Q. Now, I would take it from the fact that rates are recorded precludes the possibility of fibrillation here?

A. Yes.

Q. Because I take it it is impossible to record the fluttering that goes on in fibrillation as a rate?

A. Yes. I think and the fact that he says it is heart block.

Q. And therefore we have ventricles contracting at a faster rate than the atria, is that what is happening?

A. No, what is happening is that there is the atria rate, which is the same, but the ventricular rate varies according to the degree of block that is occurring.

Q. All right. Certainly it occurred



F.5

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to me that there was some AV dissociation going on

3

here?

4

A. Yes.

5

Q. Because I hadn't appreciated that

6

CHB meant complete heart block. I guess I was right
without knowing exactly what was recorded there.

7

A. Yes.

8

Q. In recording the electrical mode

9

of death of these children, Doctor, would it be

10

appropriate to record when heart block occurs?

11

A. In recording it?

12

Q. The electrical mode of death?

13

A. Well, the electrical mode of

14

death in bradycardia does go through the phase of
heart block.

15

Q. Does it?

16

A. Yes.

17

Q. Of necessity?

18

A. Yes, because we have seen that -

19

well, very frequently. I think in that paper on

20

electrical mode of death it describes it.

21

Q. Okay. Because heart block is, as

22

I understand it, one of the recognized symptoms of
digoxin intoxication, is it not?

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A. Yes, it is.

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Q. And for the purposes of this Commission in considering the electrical mode of death, it is I suggest of some significance to know when heart block occurs, isn't it?

A. Yes, it is, but the electrical mode of death with bradycardia does include heart block.

Q. Thanks. I hadn't appreciated that and I'm grateful, Doctor.

Now, I asked you about Heyworth on the second page. Again, I have to ask, Doctor, whether you found a reference to bradycardia here or whether it is an inference that you drew. Heyworth too was a child where there was no resuscitation, was she not?

A. Yes.

Q. And the death note is at page 165 of the record?

A. Right.

Q. No it's not, it is page 166 more exactly, Doctor.

A. Yes. I don't see anything there about that. That might make one feel it was nk. I'm not sure whether I would have felt that at 8 o'clock the rate having fallen from 125 to 112 might be suggesting bradycardia or not.



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Q. I am sorry, where do I find that,
Doctor?

A. That's page 203.

Q. Okay, thank you.

A. It's not a big difference, but
maybe I inferred that that was the reason.

Q. Okay, thank you. I don't
challenge the characterization of this, I just wanted
to ---

A. I would be quite happy to put
that in the nk category if you would prefer.

THE COMMISSIONER: I'm sorry, which
category?

THE WITNESS: Not knowing for sure.

THE COMMISSIONER: Yes.

MR. SCOTT: How is it being left? We
have Mr. Lamek not quarrelling with bradycardia and
the Doctor saying he will go this far that he will say
not known.

THE COMMISSIONER: Yes. Well, it shows
that they are accommodating, we should be grateful.

MR. LAMEK: Mr. Commissioner, I am
content to leave it where it is with bradycardia, that
was Dr. Rowe's view of the thing and I am certainly
prepared to accept that.



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THE COMMISSIONER: Yes, all right.

MR. LAMEK: Q Could we look then at Exhibit 132, Doctor. I think you may find me a little less willing to accept some of these.

MR. SCOTT: The accommodating phase is over, is it?

MR. LAMEK: A cup of coffee can only carry me so far, Mr. Scott.

Q Do you have Exhibit 132, Doctor?

A Yes, I do.

Q Now, you recorded that McKeil and Adamo both exhibited bradycardia and fibrillation in the course of their terminal events; I agree. Volk you say exhibited bradycardia not fibrillation.

Now, could we have please the medical record for Volk and it is Volume 2 in which the information is contained. I am sorry, Mr. Commissioner, that I am causing Mr. Elliot to spend all his time moving back and forwards.

Do you have the Volk record, Dr. Rowe?

A Yes, I do, Mr. Lamek.

Q Could I direct you to page 145, please, wherein the lower half of the page -- I'm sorry, the Commissioner doesn't have it yet. 145 the lower half of that page is headed Death Note and



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records what happened after the code was called. Do you not see in the middle of that note after two or three words that are crossed out "ventricular fibrillation", I believe it is - the line below it "attempts at electrical ... " what's that, "conversion"?

A. Yes.

Q. And a flat line which didn't respond and so on. Does it not appear that indeed there was ventricular fibrillation as one of the terminal events of Volk?

A. Yes. I think the reason there and, you know, there may be cases like this in the classification, is that once resuscitation starts, that is somewhat different in terms of the electrical mode of death. What I'm trying to get at, the electrical mode of death is how the patient presented at the time of the arrest.

Q. Ah, you are looking at the time of arrest, I see.

A. Yes, what was the mode of death in that situation, because I think once you start resuscitation the incidence of ventricular fibrillation becomes higher; that is I think contained in the exhibit that describes the electrical mode of death.

Now, you know, I may not have been



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consistent in that here and I recognize that that may be a problem in your reviewing, but I think this is what I would offer as the explanation for that difference here.

Q. Well, are the arrhythmias that occur during the resuscitation effort then of no significance?

A. Not as much, no. The more important issue is what happens at the time when the patient is in the process of dying. Once you start resuscitation you are pouring all sorts of things into people. I think if you look at that list you see that they gave bicarbonate, epinephrine, calcium gluconate and if you inject epinephrine into a hypoxic individual's heart he will fibrillate.

Q. If you inject epinephrine into a hypoxic individual's heart he will fibrillate?

A. Yes.

Q. Okay. Is there anything else in the resuscitation effort that will start fibrillation?

A. Oh, I think a whole host of things might start fibrillation: acidosis and so on. But I think the evidence in that New York paper is that the moment you start resuscitative procedures in which you are injecting materials and so on, that the likelihood of fibrillation rises.



F.11

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Q. Right.

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A. So, in a stricter sense you could include it, and maybe we should, but I think, at least in some of the commentaries that I've made, I have taken this into account.

Q. Okay. Could we perhaps just identify those in which fibrillation occurred at any point in the terminal events, and perhaps you could let us know whether in your view it is of any significance in that context fibrillation was occurring?

A. Yes, that could be done.

Q. Well, what about the Volk child? In the course of resuscitation it appears that there was ventricular fibrillation. Do you attach any significance to that?

A. No.

Q. All right. When I was asking you all those questions about the terminal events and the manner of dying --

A. Yes.

Q. -- were we speaking at cross purposes? I was addressing my mind I confess to all the events from the time the child was noted to be in decline until he was pronounced dead. Were you focussing on a shorter period of time?



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A. No, just for the purposes of this period I think you can focus on the whole arrest for the purposes of what was going on, but I think in terms of the electrical mode of death, it seems to me that the pure way to look at the thing is the events before the resuscitation starts.

Q. And as far as Volk is concerned, you attach no significance to the fact that fibrillation started during resuscitation efforts?

A. No.

Q. The next one is Lutes, Exhibit 69, Mr. Commissioner.

Do you have the Lutes record, Dr. Rowe?

A. Yes, I do.

Q. And can you first help me, please, from where you found the reference to bradycardia?

A. I think the reference to bradycardia is on page 53.

Q. Yes.

A. And it is noted by Dr. Costigan.

Q. That's the note at the bottom of the page?

A. Yes.

Q. "Wandered in to see Matthew - nurses and doctors concerned with him because of recent diaphoresis."



F.13

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He's getting clammy, is he?

3

A. Yes.

4

Q. And vomiting and something

5

material?

6

A. Of vilous material.

7

Q. vilous material.

8

A. I think we agreed on that.

9

Q. Yes. "On examination pulse was

at ... " 160, 140?

10

A. Yes.

11

Q. What is it, 160 or 140?

12

A. I think I would guess 160.

13

Q. "BP okay. Tachypneac with poor

14

peripheral circulation, cold clammy

15

skin, very distressed, and when I was

16

examining him his heart stopped."

17

A. Yes.

18

Q. I am sorry, you are going to have

to help me with how that discloses bradycardia?

19

A. Well, it has to stop, it has to

20

slow.

21

Q. I see. Well, of necessity then

every arrest you say ---

22

A. Well, an arrest is either

23

bradycardia or it is fibrillation.

24

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F.14

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Q How do you know it wasn't

3

fibrillation?

4

A Well, because I think he says it

5

stopped and he presumably, I'm not sure whether he

6

had anything on there, just a flat ECG. So, he must

7

have had - the monitor must have been on.

8

Q Doctor, I must be missing

9

something pretty basic here.

MR. SCOTT: You are.

10

MR. LAMEK: Q Heart arrest is when it

11

stops all movement I take it?

12

A Yes.

13

Q The electrical pattern that leads

14

to that moment of stopping is either, you say,

15

bradycardia or fibrillation?

A Yes.

16

Q All that is recorded here is the

17

heart stopped?

18

A But he says there is a flat ECG.

19

Q Well, at that moment there

20

wouldn't be, would there, it stopped?

21

A Yes, but if you had an ECG with

22

fibrillation you would show fibrillation. The

23

electrical signal is quite different from the

24

mechanical effect.

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F.15

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Q But the electrical signal for fibrillation, I would have thought, ceases and becomes flat when the heart stopped, doesn't it?

A. No.

Q It continues?

A. The electrical signal continues. I think I tried to make this point before.

Q Well, obviously I was too sick to get it, you had better help me again.

A. No, but I thought I had made it but maybe I didn't make it clear.

When you have ventricular fibrillation there is no mechanical output from the heart at all but the electrical signal is a wild thing to which you have alluded on that chart there.

Q Yes.

A. If you have no electrical signal at all, then there is a straight line on the graph. If you've got bradycardia there is an occasional blip.

Q Yes. Well, for how long does this recording of an electrical impulse that is shown as ventricular fibrillation continue after arrest?

A. Oh, it may go on for several minutes but they would be massaging it for that time.

Q Has it always gone for several minutes?



F.16

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A. It may.

3

Q. Well, you said that before and

4

that's why I asked you another question, does it
5 always?

5

6

A. I don't know whether it always

7

goes on but that's the usual thing. It doesn't

8

immediately stop like the heart pump stops. It's not
an effective pump but the electrical signal is there

9

for some period of time.

10

Q. Okay. Well, can we say anything

11

more than this that from what is recorded by

12

Dr. Costigan, the probability is that that arrest was

13

preceded by a slowing of no matter how short of a

14

duration?

15

A. Yes.

16

Q. Rather than fibrillation which

is stopped promptly?

17

A. Yes.

18

THE COMMISSIONER: I think I am going

19

to have to just pause for a moment and see if I can

20

get this down somewhere so that I will understand it.

21

Where the heart stops by reason of ventricular

22

fibrillation, the heart does stop, it doesn't move

23

at all, there still is this electrical process that

24

is recorded on the ECG for some considerable time, is
that correct?

25



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TORONTO. ONTARIO

Rowe, re-dr.
(Lamek)

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F.17

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THE WITNESS: Mr. Commissioner, the
heart doesn't stop moving. You remember, I likened
it to a handful of worms.

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Q. Yes.

A. It is that sort of ineffectual contraction. So that I presume is why the electrical signal remains. There is some sort of contraction going on but it is not effective in any way at all, so there is no output from the heart and it is just the same as if you had a slowing of the heart rate and stopping on its own. The only difference is the electrical signal.

Q. Now after the resuscitation effort is underway I notice that bicarbonate was injected intracardiac, although there is no indication that adrenalin was?

A. I think there is.

Q. Before the reference to fibrillation?

A. Yes, adrenalin 2ccs via tube.

Q. Via tube, that is not intracardiac, is it?

A. No, it would be through IV.

Q. Sodium bicarbonate was administered intracardiac?

A. Yes.

Q. Right into the heart?

A. Yes.



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Q. But not the adrenalin prior
to any fibrillation?

A. No.

Q. And in the course of the arrest
fibrillation occurred?

A. Yes.

Q. Did it not?

A. Yes. Well I think it is
related to the medication probably.

Q. The note reads ---

A. Well maybe that is too broad
a statement, Mr. Lamek.

Q. I am sorry.

A. Maybe that is too broad a
statement that it is related to the drugs, but I would
think that has some relationship.

Q. Did you attach any significance
to the occurrence of fibrillation and the resuscitation
attempt here?

A. No.

Q. Let's look at Onofre then,
that is Exhibit 70, Mr. Commissioner. In this case,
Doctor, page 61 at the bottom of the page and I think
this is the source of your information. The note is:

"Called Stat. At 3:20 a.m. Babe was
noted to be bradycardiac."



1

2

A. Yes.

3

Q. And that would be referenced

4

to the bradycardia?

5

A. Yes.

6

Q. "When arrived heart rate

7

40-100 variable - baby crying. IV

8

infusing well. Pulses palpable.

9

Called medical resident. Arrest at

10

3:29, Arrest Team arrived. Junctional

11

rhythm noted."

12

Do you attach any significance to that as part of
the electrical mode of death?

13

A. That is part of the brady ---

14

Q. That is the heart blood we

15

are talking about?

16

A. It is part of the bradycardia

17

situation.

18

Q. And after medication had been

19

administered to the child, although not apparently -

20

there was no reference to them being intracardiac,
there is apparently fibrillation because defibrillation
takes place?

21

A. Yes.

22

Q. Do you attach any significance

23

to that event in the course of the resuscitation?

24

25



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A. No.

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Q. Can we look next at Lombardo
on the next page and that is Exhibit 78, Mr.
Commissioner.

5

6

Now at page 41 of that medical record,
Doctor.

7

A. Yes.

8

9

10

Q. The resident's note says:

"Called at 3:30: irregular apex and
bradycardia..."

11

And you recorded bradycardia as part of the electrical
mode of death:

12

13

"... baby cyanosed: cool extremities:

14

weak pulses: heart rate irregular

15

(on monitor) 50-180 with variable

QRS patterns. HS faint..."

16

Heart shunt, is that?

17

A. Heart sound.

18

Q. Heart sound, all right, thank

19

you.

20

"HS faint - no murmur heard. Called
fellow cardiology and cardiovascular

21

surgeon. Tried to have arterial gases and

22

given oxygen by mask. 3:40 vomited.

23

3:45 arrest - fibrillation. Massage

24

started."

25



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A. Yes.

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Q. Now it doesn't appear we have
any administration of drugs here?

5

A. No.

6

Q. And massage is recorded as
started following the occurrence of fibrillation.

7

8

A. I am not quite sure of the
time situation there, but certainly fibrillation was
very rapidly after the arrest.

10

11

Q. Do you not understand the note
to mean arrest and the arrest was accompanied by
fibrillation?

12

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16

A. Maybe followed by fibrillation.
You see the reason that I attribute this one to
bradycardia is the fact that there is bradycardia
noted prior to the, you know, 30 minutes, 15 minutes
prior to the actual point of arrest.

17

Q. Yes.

18

19

A. And there is some irregularity
on the way to that point of the arrest.

20

21

22

Q. Yes.

A. So that seems to me to be
following the electrical mode of bradycardia with
block and so on.

23

24

25

Q. Doctor, did I not understand



1
2 you in the course of your cross-examination to say
3 that on occasion you may find bradycardia that changes
4 to fibrillation and arrest?

A. Yes, that may happen.

5
6 Q. Is it not a reasonable
7 inference that that is what happened here?

A. Well ---

8 MR. ORTVED: I think you have to take
9 that note in context with the notes on page 43,
10 which shows a different construction of events.

11 MR. LAMEK: That is from 3:45 onward.
12 I am looking at 3:45. I am grateful to Mr. Ortved,
13 but could we focus on things in chronological order.

14 MR. ORTVED: But it indicates the
15 resident who makes the note and makes the note at
16 3:45 wasn't even on the scene until 3:50. In the
17 nurse's note he is apparently keeping notes of the
18 whole arrest.

19 MR. LAMEK: Q. I suppose if we are
20 going to go into the whole thing the author of the
21 death notice, Dr. Halpern at page 18 appears to
22 understand at the bottom of the page, does he not,
23 Doctor:

24 "...at 3:45 a.m. after an episode of
25 vomiting but no aspiration the child
started to be in ventricular fibrillation."



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A. Yes.

4

Q. "Resuscitation was immediately
started with cardiac massage."

5

A. He says that in that note, yes.

6

7

8

9

Q. The author of the death note
appears, does he not, to be inclined to the inter-
pretation which I suggested to you should be placed
upon the note on page 41?

10

A. But I don't think he was there.

11

12

Q. With respect, Doctor, neither
were you?

13

14

A. No, but I think I am probably
a little better qualified to comment on the sequence
of events.

15

16

Q. Of that I have no doubt, but
what does the line:

17

18

"3:45 arrest - fibrillation massage
started."

19

Of necessity tell you?

20

21

22

23

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A. That suggests to me since there
was a monitor there that the heart arrested and then
went into fibrillation. I would take it that the
strength to that from what I have previously said
about the bradycardia and the irregularity.



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Q. All right. Doctor, is it of any significance in your judgment that the fibrillation at least seems to have occurred after the arrest, before the administration of any drug, or the application of any resuscitative effort?

A. Yes.

Q. And what is the significance of that?

A. That is also quite compatible with the fact that the baby had severe congenital heart disease.

Q. I am not questioning its consistency with those symptoms?

A. Yes.

Q. But what is the significance of fibrillation occurring on your view post arrest here as opposed to its non-significance you have told us and its occurring post arrest in other situations you have told us about?

A. Well I am not sure I can attach the significance of the actual development of fibrillation to the business as you did. I mean I think if you arrest then you go on to fibrillation that is one mode of dying, but usually - usually you have bradycardia and then stop.



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Q. I understand.

A. But if you have congenital heart disease you may fibrillate. I don't know whether there is data to show that that more often happens before you actually go through a cardio-pulmonary resuscitation or not. We do know that cardiopulmonary resuscitation increases the likelihood of that. We also know that the presence of congenital heart disease increases the likelihood.

Q. Doctor, I don't know whether I attached a significance to the event of fibrillation.

A. Yes.

Q. But I do know this, that I had asked you in the cases of Volk, Lutes and Onofre, whether you attached any significance to the occurrence of fibrillation during the resuscitation effort, and you said no, you did not?

A. No.

Q. I thought I had asked you here whether you attached any significance to the occurrence of fibrillation before the resuscitation effort started, and I thought you said yes you did?

A. No, I didn't.

Q. Oh okay, then I didn't hear you correctly.



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A. I am sorry if I gave you the wrong impression.

Q. It is probably those very convoluted questions I asked.

Then we come to Belanger, and that is Exhibit 79, Mr. Commissioner.

Once again there is that great difficulty to read the arrest note on page 64 of this record. You will remember that when we discussed this case in chief I put the original before you and I had attempted to transcribe it and we got most of the words. I ask you to trust me on this one, Doctor. There is reference in the course of the resuscitation effort to ventricular fibrillation. Once again the occurrence of that event, at that stage of the sequence I take it has no significance as far as you are concerned?

A. No.

Q. It is purely bradycardia arrest?

A. Right, I think so.

Q. It rather takes me back to that question that I believe the Commissioner asked you at one point. That is when is the child dead? When he arrests, or when you give up the resuscitation effort?



1

2

A. Yes.

3

Q. And you say it is - when is he
dead?

4

A. When is he dead?

5

Q. Yes.

6

A. Well he really - he is really
dead after you have made the decision you are not
getting any place with the resuscitation.

8

11

9

Q. But for purposes of considering
the electrical manner of his death you pick an earlier
cut-off point in time, the point in time when he first
arrests before you ever start that resuscitation?

10

11

12

A. The electrical manner of his
death is something that I think is determined prior
to the time when you say he is dead.

13

14

15

Q. What happens thereafter is of
no particular significance in attributing the cause
of death?

16

17

A. No, I don't think so.

18

19

Q. Okay, thank you. I am still
shuffling papers, Mr. Commissioner. Would you bear
with me for a moment please, Dr. Rowe.

20

21

You did say to me that was of interest
to me, Dr. Rowe, in discussing the electrical mode of
death in the course of your cross-examination.

22

23

24

25



1
2 As I recall, and the reference is
3 Volume 19, page 3348 and I don't think we need to look
4 at it. I think you will agree that you said it.
5 My note is that you said it was unusual for babies
6 with normal hearts to have ventricular fibrillation
7 as part of what, the electrical mode of dying?

8 A. Yes, I think that is so.

12 Q. In fact among the 36 children
9 we do have two infants with structurally normal hearts,
10 do we not?

11 A. Yes.

12 Q. Indeed we have three but we are
13 interested particularly in the young ones Hines and
14 Pacsai. Would you look at the Hines' record with
15 me please.

16 A. Yes.

17 Q. Exhibit 103.

18 A. Yes.

19 Q. May I direct you to page 69 of
20 the Hines' medical record please, Doctor. It is the
21 arrest note written by Dr. Costigan. It is a long
22 one, it goes on for a couple of pages and it begins:

23 "Arrest called at 0425 hours. Child
24 suddenly developed an 'arrhythmia', no
25 effective output on monitor but no



1

2

"printout. Rhythm appeared like

3

ventricular fibrillation."

4

Now, as it appears there that the electrical mode
of death was ventricular fibrillation?

5

A. It does.

6

Q. And Hines was a child with a
structurally normal heart?

7

8

A. Yes.

9

10

Q. The kind of heart which you
said is unusual to have ventricular fibrillation as
the electrical mode of death?

11

12

A. Yes.

13

MR. ORTVED: His whole reference is it
is unusual but it is possible for him to do that.

14

15

MR. LAMEK: I am grateful to Mr.
Ortved.

16

17

18

19

Q. Does the fact that Hines with
a structurally normal heart had this particular electrical
mode of dying have any significance as far as you are
concerned, Doctor?

20

A. Yes, it might.

21

Q. And what significance would
you attach to it?

22

23

24

25

A. Well I think that at the time
the feeling was that, as you know, there might be spiro-



1
2 myocarditis, and we thought a structural abnormality
3 might be found, at least not a structural but some
4 abnormality of heart muscle, that that might explain
5 that sort of thing more readily.

6 Q. And was there ---

7 A. No it wasn't found.

8 Q. I take it then the occurrence
9 of ventricular fibrillation as the electrical mode of
10 death becomes a little more interesting then, doesn't
11 it?

12 A. Yes.

13 Q. And what significance do you
14 attach to it?

15 A. Well I don't know because it
16 may occur under circumstances in normal individuals,
17 in individuals with normal hearts and possibly more
18 often than those who are hypoxic, but I don't know
19 what other significance I base that on.

20 Q. Is it of significance perhaps
21 in this respect. That Mr. Scott in cross-examining,
22 re-examining, or re-cross-examining, whatever it was
23 he was doing yesterday.

24 A. Yes.

25 Q. Was asking you about sudden
infant death syndrome and referred you to papers that



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he filed as exhibits, and I think they are 161, 162
and 163 and put to you the reference in those papers
to suggest that sudden infant death syndrome may
indeed be accompanied, or perhaps caused occasionally,
unusually by arrhythmias?

A. Yes.

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H/BN/ak

Q. And I rather took from your answers to him that those findings reported in the medical literature rather confirmed or comforted you in your view that Sudden Infant Death Syndrome was the explanation for the Hines death?

A. Yes.

Q. Is it not your understanding, Doctor, that the arrhythmias which occasionally accompany or cause Sudden Infant Death Syndrome are of a particular kind and variety?

A. No, I am not aware of a particular ---

Q. Well, could we have Exhibits 161 to 163, please, or do you have copies with you, Doctor?

A. 161, no, I do not have copies.

Q. They are the three papers on Sudden Infant Death Syndrome. Exhibit 161, which is the two-part paper by Shannon and Kelly on its first page, the lower part of the right hand column, the second last sentence of the last full paragraph -- well, let us go back:

"Some evidence suggests that central vagal nuclei and their role in cardiovascular reflexes may be



1
2 "affected, but there is no histologic
3 evidence to suggest that death is due
4 to a rhythm disturbance in most
5 infants. However, there are isolated
6 reports of death due to prolongation
7 of the QT interval or to Wolff-
8 Parkinson-White Syndrome. One report
9 may be in error; the QT interval
10 was 0.30 second."

11 And indeed, Doctor, having struggled through these
12 papers, perhaps you could turn with me to page 963
13 of that same paper?

14 A. Yes.

15 Q. Cardiovascular Factors:

16 "Arrhythmias account for a small number
17 of cases of SIDS, and recent evidence
18 from babies with near SIDS suggest
19 an alteration in control of the heart
20 rate..."

21 And so on. The next paragraph:

22 "Arrhythmias, a common cause of sudden
23 death in adults, account for only a
24 small fraction of cases of SIDS.
25 A prolonged QT interval has indeed
been identified before death or



1

2

3

"resuscitation, but only three cases."

4

Can you tell me anything about the arrhythmias which
apparently accompanied Jordan Hines' arrest?

6

A. I am not quite sure what

7

your question is aiming at in relation to that

8

comment you just made about the QT.

9

Q. Can you tell me whether the

10

arrhythmias exhibited by Jordan Hines were of the
kind described in the paper, a prolongation of the

11

QT interval?

12

A. I do not think so. I am not

13

absolutely sure that the QT was measured here, but

14

I do not think so.

15

Q. Indeed, if it were fibrillation,

16

Doctor, would you be able to measure a QT interval?

17

A. No, but you would have been

18

able to identify QT interval on electrocardiograms
prior to that point.

19

Q. Is there a rhythm strip

20

taken at the time of arrest in the Jordan Hines'

21

record?

22

A. No.

23

Q. No?

24

A. I do not think so. I think

25



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when we examined the information that was requested the other day, there is a strip, a rhythm strip which just shows the brady/tachycardia that he was experiencing. We could check that for QT, but as you have pointed out, the QT theory was very rampant some years ago but it has been largely dropped.

Q. Do you know of any other arrhythmias which are known or have been recorded as accompanying or causing Sudden Infant Death Syndrome?

A. No, I do not. There have been reports, I believe, of patients who have been under observation with Near miss who get bradic but I do not know of work that specifically has analyzed electrical mode of death in Sudden Infant Death Syndrome.

Q. Well, Dr. Rowe, as I recall, these papers, and you are quite right, they span a period -- the paper we are now considering was written in 1982, which is not too long ago.

A. No.

Q. There is reference to one other kind of arrhythmia which may be discerned, I take it, on an electrocardiogram, and that was at page 605 of Exhibit 162, the Valdés-Dapena paper.



1

2

A. Yes.

3

Q. Where at the foot of the right

4

hand column it says:

5

"Schwartz...has written repeatedly about the hypothesis that, although the mechanism responsible for some sudden infant deaths may be respiratory, it is likely that in other instances it is cardiac, probably due to ventricular fibrillation and possibly dependent upon sudden increases and sympathetic activity leading to imbalanced cardiac innervation.

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One pertinent case has been reported in which a 3-week-old infant who was a victim of sudden infant death syndrome had had an ECG recorded at birth; the ECG was interpreted as having shown prolongation of the QT interval as well as T wave inversion in certain leads I, II, and V6, (which according to Schwartz, is associated with QT interval prolongation and signifies susceptibility to further prolongation)."

23

Do we know whether there was a T wave inversion that is referred to there?

24

25

A. No, there was no T wave

inversion, but I would agree with the fact that there



1 are some cases where T waves changes do occur and I
2 have had such examples myself in my own experience.

3 Q. In Sudden Infant Death cases?

4 A. Where we looked after the
5 baby at an earlier stage when the baby was premature
6 and there was evidence of myocardia ischemia which
7 we diagnosed on the basis of certain changes in the
8 electrocardiogram, and then the baby, after leaving
9 the Hospital, went home apparently well and was to
10 have been followed up for this situation and then
11 died outside in the community and the coroner said
12 that it was Sudden Infant Death Syndrome.

13 Q. Well, Dr. Rowe, does it not
14 come to this, and I do not want to take any longer with
15 it, certainly not any longer than is necessary,
16 does it not come to this, that without clearly knowing
17 the precise nature of the arrhythmias manifested by
18 Jordan Hines at the time of the arrest, we cannot
19 confidently say that the question raised by Dr. Becker
20 that the arrhythmias must be accounted for has been
21 resolved?

22 A. No, it has not been resolved.

23 Q. It has not been resolved, has
24 it?

25 A. No.

Q. Because you do not have the
factual information that would enable you to say this



1
2
3 arrhythmia was compatible with recorded instances
4 of arrhythmias accompanying or causing SIDS; is that
5 not fair?

6 A. Well, I do not know that we
7 know that for sure. We only have one or two examples,
8 and I think the whole area there is very uncertain.

9 Q. But we do know that Jordan
10 Hines exhibited ventricular fibrillation at the time
11 of arrest, that is recorded, is it not?

12 A. We do know that, yes.

13 Q. Now, the other child that we
14 have with a structurally normal heart in this group,
15 infant, is Kevin Pacsai, is it not?

16 A. Yes.

17 Q. Could we look at his medical
18 record, Exhibit 106, Mr. Commissioner. Now, on page
19 67 of the Pacsai medical record, Dr. Rowe, it is
20 reported again by Dr. Costigan at 08:45
21 approximately the child became apneic, severe
22 bradycardia followed almost immediately by ventricular
23 fibrillation; is that what appeared to ---

24 A. Yes.

25 Q. Does that not appear to
indicate the ventricular fibrillation was part of
the electrical mode of dying of this child?



1

2

A. I think it does.

3

Q. The only other infant that

4

we have with a structurally normal heart?

5

A. Yes, that is correct.

6

Q. And does the occurrence of

7

ventricular fibrillation as part of the electrical

8

mode of dying of Pacsai have any significance in

9

your judgment?

10

A. Again, that would be unusual

11

in a patient with a normal heart.

12

Q. Yes?

13

A. One can only speculate that

14

there may be some other reason why that has happened,

15

and the only -- well, the evidence clinically there

16

at the time was that this might be related to

17

potassium, and of course it might also be related

18

to something else that is familiar to this patient.

19

Q. Whose name we would not want

20

to mention, Doctor. You are absolutely right.

21

A. Yes.

22

Q. Is there anything in the

23

child's clinical condition that helps to explain

24

the occurrence of fibrillation as part of the

25

electrical mode of death?

A. I think the only matter is



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that question of the potassium.

Q. Of the potassium?

A. Yes.

Q. Doctor, two cases do not make much of a pattern, but I suppose in considering patients on a cardiology ward, one should not expect to see too many children with structurally normal hearts, should one?

A. No.

Q. And the oddity is that we have two here who died in the period, each of them exhibited that unusual pattern of ventricular fibrillation as part of the electrical mode of death?

A. Yes.

Q. I suppose two is too small a sample for you to establish any pattern or make any comment, is it?

A. I think it really is, yes.

Q. We can at least remark, can we not, upon the coincidence of the only two children with structurally normal hearts exhibiting this unusual pattern?

A. Yes.

Q. Can we just go back to Hines for a moment, please, because I confess that until



1

2

your cross-examination I had not understood that your
level of persuasion of Sudden Infant Death
Syndrome had reached the degree which it now appears
to me it has.

6

7

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9

You have just told me, I think, that
one cannot say with confidence, lacking a rhythm
strip, that the arrhythmias accompanying Hines'
arrest are indeed consistent with Sudden Infant
Death Syndrome in light of the literature?

10

A. Yes.

11

12

13

14

Q. Dr. Becker, whom you have
described as a world authority on the pathology
of SIDS gave only a guarded diagnosis of SIDS, did
he not, in his autopsy report? It is at page 28.

15

A. Yes.

16

17

18

19

20

Q. Or more precisely -- yes, at
page 28. He said it makes that all those things,
the pathological findings, the brown fat, all those
things, makes the diagnosis of a missed SIDS a
possibility and he was obviously troubled, was he
not, by the arrhythmias?

21

A. Yes, I think he was because
it is not very common.

22

23

24

25

Q. Did you discuss with Dr. Becker
his view as to the cause of death of Jordan Hines?



1

2

H11

A. No, I did not.

3

Q. Is there any particular

4

reason for you not having done that, Doctor?

5

A. I cannot remember whether

6

that was related to the fact that we did not get

7

the report until long after the investigations were
under way.

8

Q. What did you tell the parents
of this child was the cause of his death?

9

10

A. I did not tell the parents.

11

Q. I am sorry?

12

A. He was not a patient that I

13

had anything to do with in that sense.

14

Q. Do you have any information

15

or understanding as to what the parents were told as
to the cause of the death of their child?

16

A. No, I do not.

17

Q. Do you know when they were

18

given information as to the cause of the death of
their child?

19

20

A. Well, I imagine that Dr. Vera

21

Rose may have said something to them about it, but

22

I am not sure when they would have the final report
about the Sudden Infant Death issue.

23

Q. Prior to receiving or seeing

24

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H12

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a copy of the autopsy report, had Sudden Infant Death Syndrome occurred to you as a possible cause of this child's death?

A. No, we were still engaged in looking at the question of myocarditis, at least as we saw it, and we were more persuaded in the direction of Sudden Infant Death by the lack of evidence there and by the observations of the record that Dr. Bain had deduced.

Q. All right. Can we look at those in turn. Do I take it from what you have said that Sudden Infant Death Syndrome is in the nature of an exclusionary diagnosis?

A. Yes.

Q. That is what you come to if you cannot find anything else?

A. As long as there is some evidence for it.

Q. And when you got the autopsy report there was some evidence of it in the pathology of the child but one of the world's experts on pathology of SIDS said it is only a possibility because there are arrhythmias to explain, and you did not go and discuss it with him. Do you know if Dr. Vera Rose discussed it with him?



1

2

A. I do not know.

3

Q. Now, when did you read

4

Dr. Bain's report?

5

A. I do not know what date that

6

was.

7

Q. I understand it was written

8

in the summer of 1982?

9

A. Something in that area.

10

Q. Now, what is it in Dr. Bain's

11

report that enabled you to reach the level of

12

persuasion that you have now reached that this was

13

a SIDS death?

14

A. Well, I think the main thing

15

was -- see, I do not believe I had the information

16

about the histology either, so the exclusion of that

17

concern, the presence of a substantial number of

18

the markers that are widely believed to represent

19

Sudden Infant Death Syndrome pathologically and the

20

history even more importantly perhaps, the history,

but particularly in association with the markers are

what have led me to that position.

21

Q. Well, what then did Dr. Bain's

22

report have to do with it?

23

A. Dr. Bain's report was that

24

he brought out the issue of the earlier history and

25



1

2

symptoms as well.

3

Q. I see. Certainly no one

4

questions Dr. Bain's evidence as a pediatrician?

5

A. Well, you do so at your peril.

6

Q. I will remember that, thank

7

you. The Hines death, as I understand it, Dr. Rowe,
was never reported to the coroner, was it?

8

A. It was not reported by us

9

to the coroner. I think it was later reported.

10

Q. By whom?

11

A. By the police, I think.

12

Q. Okay. Why was it not reported?

13

A. I think I have said before

14

that that was a judgment call and that we were
expecting to get the information from the autopsy
rather quickly.

15

16

Q. Now, Doctor, I have some

17

questions about individual children. I will not take
long with them and then I have a few questions about
the events in March.

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Indeed, Mr. Commissioner, I see that Mr. Shanahan is here and has probably been here for a long time. Since I am about to move on to something new, is this an appropriate time for Mr. Shanahan to ask his questions?

THE COMMISSIONER: Mr. Shanahan, we heard you had some questions. Can you do it in ten minutes or would you rather do it after?

MR. SHANAHAN: Oh, no, I can do it in a very few minutes.

THE COMMISSIONER: Yes, all right.
FURTHER CROSS-EXAMINATION BY MR. SHANAHAN:

Q. Doctor, with respect to the additional page that came in here on Lombardo, which I had marked as page 38A, that was the page that was --

THE COMMISSIONER: Hang on a second and we'll get that. This is the Lombardo medical record?

MR. SHANAHAN: It would be the Lombardo chart, sir, and then it would be the additional page that Mr. Lamek brought forward yesterday.

THE COMMISSIONER: Yes.

MR. SHANAHAN: Q. Do you have that, Dr. Rowe?



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2

A. Yes, I have that, Mr.

3

Shanahan.

4

Q. Doctor, that page, I think

5

Mr. Ortved pointed out to you, there is a note here
on the 21st of the 12th 1980 noted as day five, in
the first line there was a comment, "was stable
but looks blue most of the time".

6

7

Do you see that?

8

A. Yes.

9

10

Q. All right. First of all

11

we will be clear that these notes that we are looking
at on this page all concern the stay of Baby Lombardo
in the ICU part of the Hospital?

12

13

A. Yes, they do.

14

Q. All right. So, these would

15

be clearly to be distinguished from notes that may be
made subsequently about the day or the day and part
of the 23rd that Baby Lombardo was on the ward?

16

17

A. Yes.

18

Q. All right, sir.

19

You would agree that these appear
to be nursing notes?

20

21

A. No, I think that the first
two notes are from physicians.

22

23

Q. Physicians. The last one --

24

25



I3

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2

I'm sorry, not the last one.

3

4

A. The only one that is a nursing note is the third note from the top of the page.

5

6

Q. All right, that one styled "Nursing Transfer Note 22nd of the 11th"?

7

8

A. Yes, the others are physicians.

9

10

Q. All right.

And on the nursing transfer note on the 22nd it would have been made the day after the note that Mr. Ortved highlighted to you yesterday?

11

12

A. Yes.

Q. All right.

13

14

15

16

17

I take it, sir, that these nursing notes look to and record - I mean, they are brief, quite obviously, but they record for the nurse and for the doctor and for posterity if you like, certain aspects that you and they have to direct their attention to?

18

19

A. Yes.

20

Q. Temperature, the extremities whether they are cold or warm.

21

22

A. Yes.

Q. The colour, the desirable one is pink, the undesirable one is blue.

23

24

25

A. Yes.



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Q. The chest and the respiration, whether there is a gagging or whether it appears the air passages are clear.

A. Yes.

Q. I think contrasting it with my other client Dawson who wasn't feeding well, it seems to me that the nurses quite often make notes to that and the desirable one is that the child is at least responding and has some interest in their food.

A. Yes.

Q. All right. And then sometimes I see noted the nurses also note whether the child is on the one hand lethargic and unresponsive or whether this child has some vigour to it and is prepared to cry at the appropriate times.

A. Yes.

Q. All right.

And that note made on the nursing transfer the next day says "the baby looks quite pink when at rest".

A. Yes.

Q. All right. And I notice it is not just "pink", but it says that it is "quite pink". Obviously that nurse was struck by the fact



I5

1

2

that in contrast to the day before Lombardo,

3

Stephanie Lombardo is quite pink.

4

A. The day before was...?

5

Q. The day before was the note

6

Mr. Ortved pointed out where it looks blue, now I am

7

pointing out to you that the following day this nurse
said that now Baby Lombardo looks "quite pink".

8

A. Yes.

9

THE COMMISSIONER: You are

10

grammatically right. I am not too sure whether you

11

are right in vulgar parlance because people use

12

"quite" sometimes to mean "fairly".

13

MR. SHANAHAN: All right, sir.

14

THE COMMISSIONER: But certainly

15

you are right grammatically that "quite" should be
"completely".

16

MR. SHANAHAN: Q. The next word,

17

sir, appears to be "dusky". I can't read the follow-

18

ing word but it may be -- Well, I will leave it

19

to your own guess what you think it is.

20

All right. It is hard to read,

21

all right, Doctor.

22

A. I can't.

23

Q. The word is "dusky" and then

24

we will skip that word.

25



I6

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A. "Cyanosed" I think that is.

3

Q. "Cyanosed when upset".

4

A. Yes.

5

Q. All right.

6

And then the nurse makes a comment
about whether it is lethargic or not and Baby
Lombardo here and in other places had a lusty cry.

8

A. Yes.

9

Q. And here and in other places
too Baby Lombardo seemed to enjoy her cuisine here,
it says "feeding eagerly".

12

A. Yes.

13

Q. And in terms of the
temperature on the extremities she is peripherally
warm.

15

A. Yes.

16

Q. And that's what you want as
opposed to being cold or clammy?

18

A. Right.

19

Q. I can't read the next few
words, the last two words then in terms of airways
and air passages it is clear chest.

21

A. Yes.

22

Q. "Mom will be here soon". And
obviously someone has informed the mother of certain

24

25



I7

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plans or movements because there is the comment
"aware of plans for transfer".

3

4

A. Yes.

5

Q. All right.

6

I would suggest that on the note
that Mr. Ortved pointed out to you, that one would
not transfer Baby Lombardo at that point in time
from ICU out to the ward and I would suggest to you
on the second part of that question that indeed
Baby Lombardo is transferred to the ward on the
strength of the very good note that I have just taken
you through.

10

11

12

13

A. Yes, I think that's fair.

14

15

16

Q. All right, so we have
agreed to be fair, the note that Mr. Ortved points
out is tempered by the note that I have taken you
through?

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A. Yes.

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Q. And I think Dr. Jedeiken as
well, and I'm not going to even refer to it again,
I did yesterday, Dr. Jedeiken also seemed to mirror
the nursing transfer note of the 22nd.

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A. But it is two days between
his note and the 21st. My only point is that that
indicates there is some fluctuation.



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Q. Well, no. I have taken you through the note of the 22nd, sir. By my recollection, I stand correct here, she is transferred to the ward on the 22nd and she dies the turn of the evening into the 23rd.

A. That's correct.

Q. So, Jedeiken's note as well, the one that ends with the question or the proposition here that the parents were concerned that the shunt appears to be working all right, candidate for transfer to the ward. That is just off the top of my head. But that note would have obviously followed in and around the same time as the transfer note made by this nurse?

A. No, I think it was -- my point is that on the 19th Dr. Jedeiken gave physical signs that were much the same as the nurse's transfer note on the 22nd, but on the 21st the baby looked blue most of the time. So, all I'm saying is, I am not disputing at all that on the time of transfer the baby's status looked to be good.

Q. All right.

A. All I'm saying is that the status obviously can change within a day or so.

Q. Well then, it obviously did,



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sir, because within a day she was dead.

Sir, at the top of that note here where you point out about the transfusion, I read it wrong yesterday and for the record I just want to make sure no one else did. There is an NB at the end of that note and I read it as "small amount serious drainage from sternal..." and away I went.

A. Yes.

Q. But as I looked it over again later you will agree it reads "small amount serous drainage from sternal incision, incision looks not inflamed, clean."

A. Yes.

Q. And the word "serous" would I think indicate the fluid that would come from that chest cavity?

A. Yes.

Q. And that would be the cut of course that was made in that chest cavity for the operation?

A. Yes, that would not be a big problem.

Q. I think then the other thing that we were handed yesterday on Lombardo were tests done with respect to various chemicals in the body and I think they and others in the Lombardo charts



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would indicate, and I think you fairly told this to Mr. Lamek in chief that Lombardo had a high potassium level. Where I got that reference, sir, from was Volume 15 of the transcript, page 2557. That is if you take issue or you don't agree or you don't recollect.

A. Volume 15, page?

Q. 2557.

THE COMMISSIONER: 2527 did you say?

MR. SHANAHAN: 2557.

Do you find any reference there, Mr. Commissioner, I not having brought Volume 15 with me today?

THE COMMISSIONER: Yes.

MR. SHANAHAN: Do you find any reference there, sir?

THE COMMISSIONER: There is a 7.4 potassium level. "What is the significance of that, doctor?" "A. It is a relatively high level."

MR. SHANAHAN: All right.

Q. So that to Mr. Lamek's question you indicated that it was a relatively high level?

A. Yes.

Q. All right. And I know there



Rowe
re.dr. (Shanahan)

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had been some difficulty about interpreting potassium levels and what have you but I thought you did make the comment that you have observed the phenomenon if you like that high dig levels have also been accompanied by, or do accompany high potassium levels.

A. Yes.

Q. And Lombardo certainly had, I should say, the high level?

A. Yes.

Q. All right.

I am not entitled, sir, to re-re-examine you with respect to Dawson, but I just simply didn't hear Mr. Ortved's reference yesterday. Dawson was the big, thick set of exhibits. He made a reference there. He pointed out something to you with respect to Baby Dawson vomiting much earlier than her date of death.

Do you recollect that?

A. Yes, I do recollect that.

Q. All right. Just with the Court's indulgence for a moment.

She vomited on the 24th of July I believe was the date of her admission.

A. Yes.

Q. And as I recollect that, and



Rowe
re.dr. (Shanahan)

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112 2 tried to locate it yesterday, sir, and as I read it
3 later, this nurse made a note that she had woken
4 the baby from her sleep, that the baby hadn't wanted
5 to feed, that she had tried to forcefeed her and
6 the baby had vomited once.
7 A. Yes.
8 Q. All right. And as Mr. Ortved
9 pointed out, around that point in time there was a
10 therapeutic dosage of digoxin in the area of 1.9.
11 A. Yes.
12 Q. All right. So, as I look
13 at that, sir, then either this baby was woken from
14 a sleep, forcefed and vomited once and it is un-
15 related to the dig reading or, in the alternative,
16 sir, it may show, as you have indicated, that some
17 patients clinically are more sensitive to digoxin
18 and that if she is vomiting at 1.9 she may well vomit
19 much more persistently and violently if she was in
20 the toxic range.
21 A. I don't know if that neces-
22 sarily follows.
23 Q. But Mr. Ortved, I don't know
24 if he actually formally put it to you, but he
25 certainly put that quotation to you and tied it into
a reading of 1.9.



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A. Yes, that it would be unlikely to have vomiting due to digoxin at 1.9.

Q. All right. But I am putting it to you the other side of that same coin. I put it to you that it could be that she was already displaying a sensitivity even to the therapeutic range of digoxin and that that persistent and violent vomiting that later ruptured her stomach and set off the terminal events could in fact have been because she was then at the point of death no longer at 1.9 but well into the toxic range.

A. Well, I don't know how I can dispute that but I think that that would be unlikely clinical circumstances.

MR. SHANAHAN: Right. Thank you, sir. Thank you, Mr. Commissioner.

THE COMMISSIONER: Okay.

What word have you for us?

MR. LAMEK: Mr. Commissioner, I will be through by the break this afternoon I'm sure.

THE COMMISSIONER: All right, no reason then to have a short lunch hour at any rate.

All right, two-thirty then.

MR. LAMEK: Thank you, sir.

--- luncheon recess.



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--- Upon resuming at 2:30 p.m.

THE COMMISSIONER: Yes, Mr. Lamek.

MR. SCOTT: For weekend reading, we are circulating copies of the papers that we tendered as exhibits yesterday.

THE COMMISSIONER: Good, all right. I already have the copies.

MR. LAMEK: I hope that doesn't mean I have to read them again on the weekend.

THE COMMISSIONER: No.
RE-DIRECT EXAMINATION BY MR. LAMEK:

MR. LAMEK: Q. Dr. Rowe, I have just a very few questions about two or three of the children, arising out of matters that came from the cross-examinations and then two final topics.

First, with respect to Baby Valesquez, I don't think we need to have the chart for the purpose of the questions that I am about to ask you. Can you give me, clearly, please, because I confess, I am now a little bit confused, your present degree of confidence in the explanation of that child's death as having resulted from an idiosyncratic reaction to Naloxone?

A. Well, I think I am reasonably confident in this but I don't know that I can go much further than that.



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Q. Now, I understand that at some point following the death of the baby, Dr. Freedom provided to you a copy of a paper entitled "Ventricular Irritability Associated with the Use of Naloxone Hydrochloride".

Do you recall him showing you a paper which appeared to establish that the administration of Naloxone, could, at least in a couple of the patients referred to in the paper, produce some effect on the cardiovascular system?

A. I don't recall him giving that to me. I believe I got a copy of that paper from Dr. Bain.

Q. Oh, okay. Dr. Freedom thought he gave it to you, I wanted you to know, but it doesn't matter.

Let me show you a copy of what I understand that paper to be, but excuse the manuscript notation on it, it is mine, it says:

"Re Velasquez, provided to Freedom through Rowe."
which was the information I had.

A. Yes.

Q. You told me that is not your recollection?



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A. No.

Q. Is that a copy of the paper
that you received?

A. Yes, that is the paper.

Q. And from whom did you get that
paper?

A. From Dr. Bain, I believe.

MR. LAMEK: Thank you, may that be
the next exhibit, please, Mr. Commissioner?

THE COMMISSIONER: What is it?

MR. LAMEK: "Ventricular Irritability
Associated with the Use of Naloxone Hydrochloride".

THE COMMISSIONER: Exhibit 166.

---EXHIBIT NO. 166: Article entitled "Ventricular
Irritability Associated with the
Use of Naloxone Hydrochloride".

Q. Do you recall, Dr. Rowe, when
you received a copy of this paper?

A. Oh, it was not in 1981, it was
some time after, last year, or early this year, I
do not remember when I got it.

Q. Prior to receiving a copy of
this paper, had you been aware of anything in the
literature suggesting that Naloxone may indeed have
an effect upon the cardiovascular system?

A. I am not sure whether I had or



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not. I think the only information I would have had would be from the drug people, labels or something like that.

Q. Because, as I recall it, and can you tell me if your recollection is consistent with mine, at the time that Dr. Freedom made these inquiries on the day following the death of the baby?

A. Yes.

Q. The information he received was that Naloxone was not known to have such an effect?

A. Yes. I think that it is a very unusual effect.

Q. And to the extent that, in the paper which we have now marked as an exhibit, there is reference to two adult persons who demonstrated cardiovascular response to Naloxone, did that increase your level of confidence in the idiosyncratic reaction explanation of the Velasquez death?

A. Well, I think the mere fact that it could occur did increase it, but I did not know the particular examples were heavily favoured. I think the mere fact that it could occur at all was the thing that persuaded me a little bit more.

Q. The two cases were not, as we lawyers say, "on all fours", with the Velasquez



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situation?

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A. I think that is probably right.

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Q. I ask you now about Kevin

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Pacsai. Is it your understanding that the digoxin

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levels that were obtained from Pacsai, on and after

7

the time of the arrest, were ordered by Dr. Costigan?

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A. Yes, I think they were, that is
my understanding anyway.

9

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Q. Dr. Costigan was, as I
understand it, the Paediatric Resident?

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A. He was the Chief Paediatric
Resident.

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Q. Now, was he at the time of
the Pacsai death, that is to say in March of 1981, on
rotation in the Cardiology Service?

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A. I cannot remember that.

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Q. Do you have any information as
to whether Dr. Costigan discussed the ordering of
the postmortem digoxin levels on Pacsai with any
other cardiologist, or cardiology fellow, before he
ordered them?

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A. No, I do not know that.

22

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Q. Do you know whether he sought
anyone's approval for ordering those levels?

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A. No, I do not think so. At

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least, I do not know that he did. He would not be required to do so.

Q. When the levels were reported to him, do you know whether he reported them to the ward chief, who at that time was Dr. Fowler, I believe?

A. Yes, it was Dr. Fowler. I do not know.

Q. Do you recall whether he reported that to you, as head of the Division?

A. No, I did not have any report until the Wednesday following the death.

Q. On the 18th?

A. Yes.

Q. Now, you told me this morning that the normal reporting route for a resident on the service would be to the ward chief.

A. Yes.

Q. Did it appear to you at that time that Dr. Costigan, in fact, reported the results which he received about Pacsai to Dr. Carver?

A. Yes. Did it seem strange to me?

Q. No. Did it appear to you that he had done that?

A. That is what it appeared to me.

Q. And Dr. Carver was Chief of



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Paediatrics?

A. Yes.

Q. Which is the department of the hospital of which Cardiology is a Division?

A. That is correct.

Q. Do you know why Dr. Costigan reported those results to Dr. Carver rather than initially within the Division?

A. No, I do not.

Q. Did you ever make any inquiry of Costigan as to why he reported them in that way?

A. No, but I imagine he spends more time with Carver than anybody else so that would -- you know, chief residents ---

Q. Are special people?

A. They do a lot of things that most people are not permitted to do.

Q. But am I right, that the first that you heard about the Pacsai postmortem levels was from Dr. Carver on Wednesday, the 18th?

A. That is right.

Q. At a meeting at Carver's office?

A. I am not sure if it was Carver's office or whether it was immediately after the grand rounds anyway.



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THE COMMISSIONER: Immediately after
the --- ?

THE WITNESS: The grand rounds, the
major paediatric, general paediatric, rounds.

Q. And you and Dr. Fowler were
there?

A. Yes.

Q. And Dr. Carver and Dr.
Costigan?

A. I can't remember whether
Dr. Costigan was there, he may have been but I cannot
remember.

Q. If he is reported as being
there in the note was written of the meeting, you
will remember we marked that as an exhibit, can I
take it you would be satisfied that is the correct
impression?

A. Yes.

Q. All right, I do not need to
bother you with that.

There's just one small thing I would
like to clear up, please, in the medical record of
Darcy MacDonald, and perhaps you could have that
record put in front of you. I think the Registrar
has already put it beside you there, Dr. Rowe.



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A. Thank you.

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A. Yes.

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That is the information that is shown:

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Q. And suggested to:

"First of all, he is shown as having

Downs's Syndrome. Secondly, he is

shown as five months old at the date of

death. Thirdly, he had a low birth

weight of 2.1 kilograms."

"Are there any other reasons which, in

your view, put Baby MacDonald in that

category? Incidentally, I didn't

mention it but he was apparently in

severe congestive heart failure as well.

A. I cannot remember whether at the

time -- I would have to check my other

notes, but I believe there was some

question of pneumonia, but I can't



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"remember whether we thought that in
life or whether that was -- "

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And Mr. Strathy broke in:

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"If you look at page 40 of the chart,
there is a reference under Anatomical
Diagnosis No. 3, of viral
pneumonitis?"

9

That is the autopsy report, and would you turn to it
with me, please, Doctor?

10

A. Yes.

11

Q. Page 40 in the hospital record.

12

A. Yes, I have it.

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MR. ORTVED: What is the number you
referred to, please?

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MR. LAMEK: The Exhibit is 71.

16

MR. ORTVED: Thank you.

17

Q. The third of the anatomical
diagnosis reported by Dr. Becker is:

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"Viral pneumonitis, confluent bilateral?
Venal virus."

20

A. Yes.

21

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Q. Now, my only puzzlement is this,
that by the time you got to page 4002 of the
transcript, Mr. Strathy was asking this question:

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"Q. Well then, along with the child's

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"congeniatl heart problem, have I
listed the factors that go into your
assessment of the child being high
risk?

A. Yes.

Q. May I take it that this is
another case where the viral pneumonia
gives you a satisfactory explanation
post mortem?

A. Yes, together with the congenital
heart disease.

Q. Is that your assessment of why
this particular child died, a combin-
ation of a severe congenital heart
disease complicated by viral
pneumonia?

A. Yes."

And I am puzzled, Doctor, and I would appreciate your
help. Is there a difference between pneumonitis and
pneumonia?

A. No.

Q. They are the same thing?

A. Yes.

Q. Are they used interchangeably?

A. Yes.



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Q. Is pneumonitis not sometimes referred to as sort of a benign non-toxic pneumonia?

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A. Not that I am aware of.

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Q. Do you read Dorland's Medical Dictionary from time to time, or have you ever?

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A. Yes, I think I was issued with one of those copies on graduation.

9

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Q. A fine, good, old-standing dictionary, is it not?

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A. Yes.

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Q. Well, all right, I have your view on it, thank you. I was puzzled, there was a transposition that I thought should be followed.

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Can I ask you a couple of questions, not about Janice Estrella, but about certain events that followed her death, because I am interested, Dr. Rowe, to clean up and to understand, if I can, the sequence of events from the date of her death in January until the meeting with the coroners and the police on March 21st, 1981.

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21

May we begin, please, with the digoxin samples that were taken shortly before her death?

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A. Yes.

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Q. That will be found at page 159 of the hospital record, which is Exhibit 91. We have



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been through these and I know you have been taken
through them often and we don't need to do this in
any sort of laboured way, Doctor.

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A. 100 and --

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Q. 159.

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A. Thank you.

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Q. We know that on January the 7th,
a level greater than five nanograms per millilitre
was recorded in a sample of arterial blood.

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A. Yes.

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Q. Now, were you aware, Doctor, or
have you become aware that that level, that is reported
on page 159 of the record as being greater than five,
was, in fact, a level of, I believe, greater than 9.4
per cent?

16

A. No, I don't think I was aware of
that.

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Q. Obviously, I will have to ask
Dr. Ellis about this, but I show you the source of
my information, Mr. Commissioner, this is in Volume 2
of the preliminary inquiry exhibits.

21

MR. SCOTT: Could I ask what is the
date of that sample, I missed that?

22

23

MR. LAMEK: It is the 7th of January.

24

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MR. SCOTT: What is the date, I have got



1
2 mixed up here, what is the date of the Estrella
3 death?

4 MR. LAMEK: The 11th of January.

5 MR. SCOTT: The 11th of January, four
6 days before death?

7 MR. LAMEK: Yes.

8 THE COMMISSIONER: And the Volume?

9 MR. LAMEK: It is the second volume
10 of the preliminary inquiry exhibits, Mr. Commissioner,
11 and, in particular, Exhibit 46 from the preliminary
12 inquiry and the second last page in Exhibit 46. The
13 page is numbered 167 in the top right hand corner and
14 at the bottom of the page, under date 7.1.81, there
15 is a record of a sample from "Estrella, Janice, 4A,
16 7.1... ", being, I take it, the date the sample was
drawn:

17 "8:30... "

18 the time the sample was drawn, and the sample number
19 and an indication of arterial blood, I take it, by
20 the (a) recorded, greater than five. The capital "X"
21 is, I think, Dr. Ellis's version of what Mr. Scott
calls an arrow.

22 Then on the last page of the exhibit,
23 under date Thursday the 8th, the same sample number,
24 856908, it is the first sample tested after the
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controls on Thursday the 8th, and again: "Estrella, Janice" and apparently on the right hand column of that page, "X2", indicating dilution, X2 greater than 4.7 appears to be greater than 9.4?

A. Yes.

Q. And it does not appear, from what I have seen, to have done a further dilution of that sample, but that is the source of the information and I will have to ask him about it.

You were not aware that greater than five was, in fact, greater than 9.4?

A. No, I didn't know what that level was.

Q. And that is, indeed, a rather high level?

A. Yes.

Q. But Janice Estrella appears to have survived that concentration. In the sample on page 159, drawn on the 8th of January...

THE COMMISSIONER: 159?

MR. LAMEK: Page 159 of the record, Mr. Commissioner, the hospital record.

THE COMMISSIONER: Yes, yes, thank you.

Q. The sample which is numbered H56921, the level is reported of greater than 4.7?



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A. Yes.

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Q. And were you aware until now,

4

Dr. Rowe, that the actual level recorded in that

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sample, according to the digoxin book of Dr. Ellis

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was 7.8?

7

A. No.

8

Q. Well, again, I will ask Dr.

9

Ellis to verify that and I take it I don't need to

10

come and show you that?

11

A. No, I will accept that.

12

Q. That is also on the same page

13

of the digoxin book, Mr. Commissioner, that we just

14

looked at.

15

Still a high reading but obviously

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reduced from the greater than 9.4, coming down

17

because digoxin had been withheld on the preceding day,

18

had it not?

19

A. Yes, we had stopped it.

20

Q. And indeed, you told me,

21

looking at this very page of the record, that on

22

January the 7th the BUN reading for this baby had

23

been 32, which you regarded as elevated above the

24

normal range. Two BUN levels recorded on the 8th of

25

January, the early one being 21 and then down to 9,

and you told me from the 9th through the BUNs were



1

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within normal range?

3

A. Yes.

4

Q. The elevated BUN of the 7th and

5

the early part of the 8th of January, does that in

6

some way help us to understand why the digoxin level

7

was elevated to the extent that it was?

8

A. I think it does.

9

Q. Is that indicative of some

10

kidney dysfunction?

11

A. It suggests that, yes.

12

Q. And by January the 9th, on page

159 of the record, the level is down to 4.7?

13

A. Yes.

14

Q. Coming down in the period that

15

digoxin was withheld?

16

A. Yes.

17

Q. But still, I take it, unaccept-

ably high?

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A. Yes, not the best level.

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Q. And now, with respect to the

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postmortem samples, do you know who ordered those?

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A. No, I don't. I know who was

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supposed to have ordered them from all the transcripts

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and everything, but I don't know who actually did

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order them.

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Q. The person who is alleged to have ordered them, I tell you, has no recollection of having done so.

A. Yes.

Q. So that may be another mystery that we have to resolve. Have you made any inquiry as to who ordered those postmortem levels on Estrella?

A. No, I haven't.

Q. Were you not interested to find out?

A. Not especially.

Q. Do you know why they were ordered?

A. I wondered whether they might have been ordered because someone had read the notes and seen the levels during life as moderately high and thought it might be useful to know what the post-mortem level is.

Q. That is your own speculation?

A. That is speculation on my part.

Q. If you have made no inquiry as to who ordered them, you obviously made no inquiry as to why they were ordered?

A. Yes.

Q. Now, Mr. Ortved read to you,



1
2 in the course of his examination, parts of Dr. Taylor's
3 evidence at the preliminary inquiry, with respect to
4 the taking of those samples, and I want to read you
5 a little more of Dr. Taylor's evidence in a few
6 minutes.

7 We now know that there were not less
8 than two samples taken post mortem from Estrella's
9 body. One, the one that is known as the gutter blood
10 sample, and the other from the venous blood from a leg
11 vein?

12 A. Yes.

13 Q. If I understood you correctly,
14 Dr. Rowe, you did not learn of any postmortem levels
15 recorded on Janice Estrella until the second week of
16 March of 1981?

17 A. Yes.

18 Q. And at that time, Dr. Fowler
19 showed a copy of the autopsy report?

20 A. That is right.

21 Q. Can we look at the autopsy report
22 at page 9 of Estrella's record? The report begins at
23 page 9, the passage which we are interested in is on
24 page 12. Before we get to 12, let us look at 9 for
25 a minute, Dr. Rowe, this is the final autopsy report
on Janice Estrella?



1

2

3

A. Yes.

4

Q. Was there a preliminary autopsy
report?

5

A. I don't know. I didn't see it

6

if there was.

7

Q. No, and I haven't found it in

8

this record either. Is it usual for there to be a
preliminary autopsy report?

9

A. Yes.

10

Q. And that is normally available

11

substantially ahead of the appearance of the final
autopsy report?

12

13

A. Yes, it is.

14

Q. You have no recollection of

15

ever having seen one?

16

A. No.

17

Q. And the autopsy report, I take

18

it, that Dr. Fowler showed you in about the second
week of March was this final autopsy report?

19

A. I think it must have been, I

20

don't recall looking specifically to see which one it
was.

21

22

Q. Now, I take it he directed your

23

attention to the final paragraph on page 12?

24

A. Yes.

25



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Q. And having read that paragraph,
which I take it you then did --

4

A. Yes.

5

6

Q. -- you were aware of the
possible contamination of the samples he there
referred to?

7

8

A. Yes.

9

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BN.jc
BB.1

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Q Did you then believe, that is to say, in the second week of March, having read this report, did you believe that the sample, if contaminated, would have produced an invalid assay reading?

A. Not an invalid assay reading but ---

Q Well, invalid in the sense that you would place no reliance upon it?

A. Yes.

MR. ORTVED: I think he was going to finish the response.

MR. LAMEK: Q We were going to say the same thing, were we not?

A. Yes.

Q Thank you.

MR. SCOTT: It is always good to know after the event.

MR. LAMEK: Q And I take it, Dr. Rowe, that that would be so if the contaminants of the sample were richer in digoxin than the blood component of the sample?

A. Yes.

Q Did you at that time, that is to say, in the second week of March, have any knowledge or information as to the digoxin concentrations that



BB.2

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one might expect to find in edema fluid?

3

A. No, I do not think I did except

4

that I think I knew that tissue had higher

5

concentrations than myocardium.

6

Q But what is referred to in the

7

final paragraph is slight contamination by edema

8

fluid and ascites fluid?

9

A. Yes.

10

Q I am sorry, did you tell me that

11

you did not then have any knowledge or information

12

as to the digoxin concentrations one might expect to

13

find in edema fluid?

A. No.

14

Q What about ascitic fluid?

15

A. No, but I assumed that the tissue

16

contamination of those fluids would produce the same

17

sort of effect as tissue.

18

THE COMMISSIONER: I am sorry, you say

19

you assumed, are you assuming now or were you assuming

20

then?

THE WITNESS: Yes, I was assuming then.

21

THE COMMISSIONER: And at that time

22

you knew of the tissue ---

23

THE WITNESS: The tissue would have

24

a higher level, yes, indeed, it is well known.

25



BB.3

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MR. LAMEK: Q Did you make any inquiry of anyone as to the effect of contamination with edema fluid and ascitic fluid?

5

A. No.

6

7

8

Q May I take it, then, Doctor, that you are less than absolutely sure that contamination of the kind described in the paragraph set out would indeed have produced an unreliable level of digoxin?

9

10

A. I think that I was well aware that that could do that.

11

12

Q It could do that?

A. Yes.

13

14

Q My question was you were less than absolutely sure that that is what would happen?

15

16

17

A. No, I do not think that is so. I think that any contaminated sample leads you to be very concerned about the validity of the reading or the interpretation of the reading.

18

19

20

21

Q I understand, but forgive me, if I contaminate a high concentration of liquid with a relatively low concentration contaminant, the effect is to produce an under-reading in the contaminated sample, is it not?

22

23

24

25

A. That would be the case if you had saline or something that you would put into the



BB.4

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body, but anything that has fluid has had to go
through tissue.

4

Q Yes, I understand, but it is a
question of the relative concentration, is it not?

5

6

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10

11

A Yes, but if you had a high
concentration of any reading like that at all, there
would have to be some tissue component to it. Tissue
component is higher than the fluid. In every digoxin
situation the myocardial concentration and so on is
higher than it is in the blood and that is the
thinking that I was doing.

12

13

Q Subject, I suppose, to time of
dose, time of sample, that sort of thing?

14

15

16

A There are all sorts of things,
yes, but especially in somebody who had had levels
that we knew in this baby were higher during the life
of the baby.

17

18

19

Q Well, were you in other words
relating the level, reported level of 72 to the levels
that had been measured in this baby during life?

20

21

A Well, I knew that this baby had
difficulty with that, with controlling the digoxin
during life, so that seemed to fit together.

22

23

24

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Q But equally, as I recall your
evidence, you also considered the possibility of
laboratory error?



BB.5

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A. Oh yes, we did. I do not know whether we would say equally, but we certainly did consider that there might be a simple decimal point problem.

Q. Well, Doctor, let us consider that. If you considered the possibility of a decimal point problem, I take it you mean that the level should have been reported as 7.2, not 72?

A. Yes.

Q. That is the decimal point error you had in mind?

A. Yes.

Q. But are those two speculations not mutually exclusive, that is to say, if you are prepared to contemplate that one explanation is that the reported level is 7.2, not 72, that rather attacks the underpinning of the assumption that this material has been contaminated by tissue fluids which will greatly elevate the level?

A. There are two different views, yes.

Q. And if you are prepared to contemplate the possibility of not a 72, but a 7.2 level, does that not suggest something less than absolute confidence in your theory about the contamination?



BB.6

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A. I think those were just the two points that were raised by Dr. Fowler and myself.

Q. Yes, I understand. But my question, Doctor, is if you are absolutely sure, as I thought you told me, that contamination with tissue fluids would produce a markedly elevated level --

A. Yes.

Q. -- why would you even contemplate the possibility that the level really should merely be 7.2?

A. Well, that did not have as high a priority for us as the contamination.

Q. Did you contemplate for a moment the possibility that the level of 72 might be real and reliable?

A. No, we did not think that very likely and we did question whether that was a possibility, but we thought these other things overrode it.

Q. You did not think that very likely, but was it a possibility that occurred to you?

A. Yes, I think we did consider the possibility it was real, but we did not hold that possibility for very long.

Q. Did you do anything to eliminate it as a possibility? Did you make any inquiry or cause



BB.7

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any inquiry to be made as to the manner of taking the
sample, the manner of conducting the assay or anything
else?

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A. Well, Dr. Fowler and I discussed
this, and I believe that I suggested that we should
have Dr. Freedom look into it, and it is a little
hazy from there on because I do not think he recalls
exactly whether he asked Dr. Freedom or whether I did
or whether neither of us did. But I thought that we
did have some feedback from Dr. Freedom.

Q. Well, you recall that Dr. Freedom
was away for a few days at the beginning of March,
1981, his mother had died?

A. Yes.

Q. And he was in California. And I
understand that he did not return to the Hospital
until ironically Friday, the 13th of March?

A. That is true.

Q. Do you have any recollection
whether Dr. Freedom was around the Hospital at the
time you learned of this level?

A. I do not know for sure, but I
think it was probably after he came back that this
matter came up.

Q. And Dr. Rowe, believe me I am not



BB.8

1
2 questioning your recollection at all, but I think it
3 fair to tell you, as indeed I am sure you already
4 know, that Dr. Freedom apparently has no recollection
5 of being asked to follow this thing up?

6 A. Well, we are a little uncertain
7 as to exactly how the communication went too.

8 Q. But you think that you and
9 Dr. Fowler decided between you that somebody should
10 ask somebody to make some inquiry about it?

11 A. Yes.

12 Q. Well, did you do any follow-up to
13 make sure whether the inquiry had been made?

14 A. Well, my recollection was that
15 we got some feedback back. I know that Dr. Freedom
16 does not recall that he said anything to us in this
17 regard, but I thought that we had got that back. Now,
18 whether we did not get it back and the events are
19 coloured by what happened the next week, I do not
20 know. I mean, it is quite possible that we are
21 mistaken.

22 Q. But you have a recollection of
23 getting something back and you think from Dr. Freedom?

24 A. I thought so.

25 Q. Do you recall when and what?

A. No, I thought that we got back



BB.9

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that there was no obvious concern from pathology about the meaning of the data, that it was contaminated, but I accept that that may be clouded with the retro-spectroscope rather than the reality of what went on.

Q Now, I take it that the possibility, however remote, that the 72 level was indeed accurate and reliable was one that had to be dealt with by you? No matter how remote it was, you had to be able to dismiss it, did you not?

A. Yes.

Q Because if the level were accurate and reliable, then a number of very difficult questions arose to be answered, did they not?

A. Yes.

Q Because since January 7, no digoxin had been prescribed for administration to this baby?

A. That is correct.

Q And you would have had to find out whether an unprescribed dose had been administered?

A. Yes.

Q And if so when and how much and by whom, if you could?

A. Yes.

Q And on the reasonable assumption



BB.10

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that it would have to be a mistake at that time, you
would have to find out how that could have occurred?

4

A. Or there might be other
explanations too, of course.

5

6

Q. Yes. With the possibility in
mind, again no matter how remote, that this level
might indeed be accurate and reliable, did it occur to
you to wonder why it had taken two months to be
reported to the ward?

9

10

A. Why it had taken two months?

11

Q. Yes.

12

MR. ORTVED: Well, that same question
was asked on examination in chief. Now, I appreciate
that I went into this area with Dr. Rowe, but this
strikes me as examination in chief on the same area
all over again, and the precise answer to that question
when asked before was I presume for the same reason
that pathology did not report it.

17

18

MR. LAMEK: Well, I am sorry, Mr. Ortved
may well be right and I certainly have no intention
of being merely repetitive of what was said in chief.

20

21

Q. Is that your recollection too,
Doctor?

22

A. Yes, it is.

23

24

Q. And that was the answer that you
gave?

25



BB.11

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A. Yes.

3

Q That it was not reported because

4

pathology did not report it?

5

A. That I thought the reason would

6

be that it was not reported to me because pathology

7

thought it was contaminated.

8

Q Did you ever learn when the

9

digoxin assays had been performed?

10

A. Did I ever learn when they had

11

been performed?

Q When they were performed?

12

A. I am not sure that I did. I am

13

not sure now. I may have looked at that more recently
but I cannot recall. At the time I do not think ---

14

Q All right. Forgive me, I do not

15

mean to ask this if I have already asked it. Tell me

16

if you have a recollection. Did you at some point

17

learn that Dr. Freedom had learned of the 72 nanogram

18

level about the end of January 1981?

19

A. Yes, I eventually learned that.

20

Q When did you learn that?

21

A. That was much later. I cannot
remember when.

22

Q Much later than the second week

23

of March?

24

25



BB.12

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A. Yes.

3

4

Q. When you found out that he had been told of that level at the end of January 1981, did you have any conversation with him about it?

5

6

A. Did I have any conversation?

7

8

Q. Yes, about his having had that information almost two months before he came to you?

9

10

A. My recollection of that is that he thought there was some error and that he had asked them to look into it, but they did not get back to him.

11

12

Q. Did you ask him what he had done, if anything, to follow up his request that they look into it?

13

14

A. No.

15

16

Q. And did you say to him, "Bob, even though you told them to look into it, why didn't you tell us earlier that they'd reported that level?"

17

18

A. Well, I may have asked him that question, I cannot recall.

19

20

Q. You do not recall. Therefore, you have obviously no recollection of what his answer may have been?

21

22

A. No.

23

24

25

Q. Now, until I examined you in these proceedings, Dr. Rowe, as I understand it, you



BB.13

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were not aware that more than one sample had been
taken from Janice Estrella?

3

4

5

A. I think I may have -- I did not
know that until either these proceedings or I remember
reading a transcript or something like that.

6

7

8

9

Q. And as at March 21, the day of
the meeting with the coroners and the police, did you
know any more about the one sample of which you were
aware than is reported in the autopsy report?

10

11

12

13

A. No.

14

15

16

17

18

Q. At the meeting on March 21, did
you alert the coroners and the police to the suggestion
that the 72-nanogram level might not be reliable?

19

20

21

22

A. No, I do not believe I did.

Q. But it was your belief at that
time that it was probably not reliable?

23

24

25

A. Yes.

Q. Do you recall any discussion of
that point at the meeting of March 21?

A. I seem to remember that there
was consideration because of Pacsai and the knowledge
of the level of Estrella that maybe there was something
more to this than we had thought.

Q. But you do not have a recollection
of anyone from the Hospital at that meeting saying



BB.14

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careful with the Pacsai level, it may not be that good?

3

4

A. No.

5

Q. Sorry, the Estrella level?

6

A. The Estrella level.

7

Q. Now, let us go back a step in

8

the chronology from March the 21st. You have told us that you learned of the Estrella level in the second

9

week of March, and obviously, it was a level which as

10

reported concerned you, concerned you enough that you

11

would like to have had some explanation of it, is that fair?

12

13

A. Well, I really was not that

14

disturbed by it in view of the contamination issue

15

really. I thought the others should perhaps be done,

16

but I did not really expect to get much from them.

17

Q. Is it your recollection that you

18

learned of the Pacsai levels after you learned of the Estrella levels?

19

A. Oh yes. I think about a week

20

later.

21

Q. Are you aware that Dr. Fowler's

22

recollection has been to the contrary?

23

A. Yes, I understand that.

24

Q. Yes. But your recollection is

25



BB.15

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you learned first of Estrella and then about a week
later of Pacsai?

3

4

A. Yes, I think that is right.

5

6

Q. And I think you have told us in
chief that the Estrella level as reported was a number
that neither you nor Dr. Fowler had ever seen before?

7

8

A. That is right.

9

10

A. That is right.

11

12

Q. Estrella 72, Pacsai 25, and you
have told us that you did not, upon learning of Pacsai,
bring Estrella into your mind and make a connection?

13

14

A. No, I did not.

15

16

Q. When did you first make that
connection?

17

A. I made that connection in the
coroner's meeting, I think, or on that Saturday anyway.

18

19

Q. Now, with respect to the
contamination of the samples, you have told me what you
knew about the contamination of the only sample of
which you were aware until very recently?

20

21

A. Yes.

22

23

Q. But in cross-examination, we have
heard something else. Before we move to the leg vein

24

25



BB.16

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sample, do you have any further information today than
you had back in March 1981 as to the contamination
of the gutter blood sample?

4

5

A. I think that I have more
information because I now know from the transcript of
Dr. Taylor ---

6

7

Q. How it was drawn?

8

A. -- how it was drawn.

9

10

Q. Now, with respect to the venous
sample from the leg, you have suggested, as I under-
stand it, the possibility of contamination of that
sample as a result of the massage of the vein in the
leg to obtain the sample?

11

12

13

A. Yes.

14

15

Q. Now, can you explain to me, please,
exactly what you understand may have occurred or may
be the problem with that leg vein sample?

16

17

A. Well, I think, you know, this is
a matter where the detail of what the pathologists did
is pretty important, so that I can only speculate a
little on what may have occurred. But if he went
down to get the sample after he had finished the
autopsy and the body was in another area, and therefore
had to take the sample from the leg vein after opening
up the abdomen again to get that, I presume that he

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19

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BB.17

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took the leg sample from the iliac vein or the femoral vein.

3

4

Q. Yes?

(2)

5

A. And that there was a good

6

possibility that that may mean that the material was milked, that the milked up may have been contaminated with other fluid.

7

8

Q. Now, can you explain to me,

9

please, ---

10

A. If he had cut through the vein,

11

you see. It depends on what he had done. That is

12

what I mean. If he had not cut through the vein,

13

there might be less chance of contamination from fluid in the gutter.

14

15

See, if you had a vein that was cut and you had to stick a syringe in to suck out material, there would be a possibility that tissue around that may have contaminated the sample. That is in addition to the milking question of whether you massage material.

16

17

18

19

Q. Can you explain to me how you massage material into the sample by milking the vein? First of all, what is involved in milking a vein?

20

21

22

A. Milking a vein normally means

23

that you massage the leg or the tissue in which the vein lies, massage it towards the point that you are

24

25



BB.18

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2

trying to get -- whatever you are getting a sample from.

3

4

5

6

Q So, if for example I had cut myself there or cut a vein at that point and wanted to milk it, would I run my thumb along the course of the vessel to the opening?

7

8

A. The other way.

9

10

Q The other way?

A. You would run it from your fingers up to where you had cut.

11

12

13

Q All right, I had cut up here, towards the elbow, then run my finger along the course of that vein from the hand up to the cut?

14

15

16

A. Yes.

Q All right. And in the process of doing that, how do you think the contamination may occur?

17

18

19

20

21

22

23

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A. Well, I think you may be able to get contamination just like you can with cardiac massage perhaps. I do not know for sure but I think that is possible. But I think the greatest danger would be the area where the cut is or contamination from fluid in that region, especially if you had to squeeze very hard to get the material there, and you know, I think that is a matter that Dr. Taylor will probably have to answer. But I would be very suspicious of a sample obtained in that way for those reasons.



CC/BB/ak

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Q. Have you spoken to Dr. Taylor
about his method of obtaining this?

4

A. No, I haven't.

5

Q. You haven't made any enquiries?

6

A. No.

7

Q. Is he still at the Hospital?

8

A. No, he isn't.

9

Q. Oh, I thought he was, forgive
me.

10

MR. ORTVED: Vancouver.

11

MR. LAMEK: Vancouver, thank you.

12

13

Q. Have you read what he said
about the way in which he obtained the sample?

14

A. It is some time since I read
it, but I did read it.

15

16

Q. Perhaps we can remind ourselves.
Doctor, it is in Volume 17 of the transcript of
the preliminary inquiry. Mr. Ortved read to you
some of what I am about to read and I will be
reading other parts as well.

17

18

19

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Now, I will begin at page 111,
Mr. Commissioner.

21

22

THE COMMISSIONER: It doesn't do me
any good if I haven't got it.

23

24

MR. LAMEK: Oh, you haven't got it.

25



CC2

1
2 I'm sure that Mr. Ortved and Mr. Scott will ensure
3 that I read it accurate.
4 Q. The question of Dr. Taylor:
5 "Q. Did you take any kind of a
6 blood sample or blood samples from
7 Baby Estrella?
8 A. Yes I did.
9 Q. And where did you take these
10 blood samples, from what part of the
11 baby's body?
12 A. There were two samples; one
13 sample was obtained from blood milked
14 from leg veins.
15 Q. From where?
16 A. The leg veins, and the second
17 sample was obtained from blood and
18 fluid in the pelvic cavity of the body.
19 Q. In the pelvic cavity. Could
20 you just show me where that would be,
21 down here, you are indicating on the
22 stomach, beneath the stomach.
23 A. Yes.
24 Q. All right. And did you take
25 both those samples?
A. Yes.



1

2

"Q. And how did you take them?

3

A. I took them with a syringe,
yes, and placed them in test tubes."

4

5

And then the next passage which

6

appears to me to be of any relevance, Doctor, begins

7

at the bottom of page 112, Dr. Taylor says:

8

"I forgot to obtain specimens during

9

the usual course of the autopsy and

10

I had to go back to the morgue, which

11

is in the basement below the autopsy

12

suite and open the body and obtain

13

the specimen.

14

Q. All right. How were you able

15

to identify the body and so on? How
much earlier had you done the autopsy?

16

A. I think it was about 30 minutes

17

between finishing the autopsy and

18

remembered that I had forgotten to

19

take the specimens."

20

At page 113 at the bottom:

21

"So, you obtained one sample from the
leg and one from the cavity below the
stomach?

22

A. Yes.

23

Q. Would either of those exhibits

24

25



1

2

"be contaminated in any way, to your knowledge?

3

4

A. Yes. The pelvic sample was most likely contaminated with edema fluid from the tissues and from ascites fluid from the cavity itself.

5

6

7

8

Q. All right. And when you say contaminated, I use the phrase contaminated, would that mean diluted or what?

10

11

A. The blood would be diluted by these fluids, yes.

12

13

Q. Diluted by the fluids?

14

A. Yes.

15

Q. So, you obtained these samples in order to obtain digoxin levels?

16

A. Yes."

17

And then, Mr. Commissioner, going to page 116, the question on the preceding page refers to two specimens:

18

19

20

"A. There were two samples. There was a small sample of blood obtained directly from a leg vein and the larger sample which I thought might be contaminated with body fluid I had

21

22

23

24

25



"them in separate vials."

He is merely separating the two directly from the leg veins. And then at page 121, the final passage that I want to read to you, it begins at the bottom of the preceding page where Dr. Taylor says:

"I was not familiar with postmortem digoxin levels. Therapeutically the range that I am familiar with is approximately $1\frac{1}{2}$ to $2\frac{1}{2}$ nanograms. The usual range which toxic effects start is between $2\frac{1}{2}$ and 5 nanograms and death can occur somewhere around 10." --

MR. SCOTT: Where do you see this,

I'm sorry?

MR. LAMEK: Page 121 at the top.

Q. "So, the result of 72 was mystifying to me.

Q. Mystifying to you?

A. Yes.

Q. If the blood had been obtained in the area below the stomach, and in an area where it would have been mixed with other fluids, would that have diluted the amount of digoxin that would



Rowe, re-dr.
(Lamek)

1

2

"have been found in that area?

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A. Most likely yes.

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Q. The amount that you obtained
you obtained an amount from there and
you also indicated from a vein in the
leg.

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A. Yes.

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Q. The amount that you obtained
from the vein in the leg, I take it
would not have been diluted with any,
or contaminated with any other fluid.

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A. No, it was blood."

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THE COMMISSIONER: I should know this, it is probably
in this exhibit, but were there two assays done on
these two separate vials or do they just do one, just
report one, or what happens?

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MR. LAMEK: As I understand it,

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Mr. Commissioner, the leg sample was not diluted, it
reported a level greater than 4.7 but for some
reason, and perhaps Dr. Ellis will be able to explain,
there was no dilution to obtain a true level.

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The other sample, the pelvic cavity
sample was diluted a sufficient number of times to
produce the 72 nanograms.

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THE COMMISSIONER: 72?

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MR. LAMEK: That's right.

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Indeed, Mr. Commissioner, it will be clear that the pelvic cavity sample was in itself divided into two. There were sort of two vials of that and one of the...

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MR. SCOTT: And Dr. Ellis' records I think substantiate what my friend has said by reference to the numbers of the samples.

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MR. LAMEK: Yes.

THE COMMISSIONER: Yes.

MR. LAMEK: Q. Now, Dr. Rowe, do you take any comfort or do you have your concerns aggravated by Dr. Taylor's assertion that he took the blood directly from a vein and it was not contaminated by any other fluids at least?

A. Well, I think I have to accept his statement. I would still have some reservation about any samples taken when you go back to a body that's had a full post mortem done on it and fluids all over the place.

Q. All right, we are going to have to hear what Dr. Taylor says?

A. I think you probably would. The pharmacologists are probably able to give you a better opinion on that. You know that I am not an



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expert.

Q. No, I understand. When, Doctor, did the concern about possible contamination of that sample first come to your mind?

A. Of the venus sample?

Q. The venus sample.

A. Just on hearing the way in which it was collected.

Q. And when did you hear how it was collected?

A. Well, that was when we learned this recently.

Q. I don't recall in chief I read to you the evidence of Dr. Taylor?

A. No, you read to me the sample. That was the first time I knew there was a sample.

Q. Yes.

A. But I knew from the transcript that whatever samples were obtained had been obtained from the post mortem after the post mortem had been completed.

Q. All right. Now, you are now aware I take it, Dr. Rowe, that Dr. Mancer, the pathologist, reported the death of Janice Estrella to the coroner on March the 20th.



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A. Yes, I now am.

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Q. When did you learn that?

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A. I think I learned that

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relatively recently in reading some diary of something
or other, events.

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Q. Have you asked Dr. Mancer what
prompted him to make that report at that time?

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A. No.

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Q. Just one other question about
this Estrella record and I will leave it, Dr. Rowe.

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At page 156, which is the biochemistry report reporting

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the level of 72 nanograms. It is circled in some

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form of manuscript and there is a notation below it

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which reads "leg milked? mainly gutter fluid". Do
you recognize the handwriting?

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A. No, I do not.

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Q. All right.

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A. It is not mine.

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Q. No, I know it is not yours,

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I think I have learned to recognize yours. But you
do not recognize that?

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A. No, I don't.

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MR. OLAH: Excuse me, Mr. Commissioner,

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before Mr. Lamek moves on, I am wondering if he could

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help us by clearing up one matter that is troubling

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me and that is how the doctor feels there would be contamination of blood taken directly from the vein by gutter blood, which I understand is in the abdominal cavity.

MR. LAMEK: Q. I don't mind asking that question, although, I confess, I didn't think you were labouring under that particular belief about the contamination of the venus sample.

A. No, I think that that was one of the considerations that I have.

Q. Did you contemplate that the blood had been squeezed out of a leg in the vein into the body cavity?

A. No, but I thought that in the election, if the vein was cut, if blood was milked up it would have to become contaminated with fluid in the pelvis.

Q. Oh, I see.

A. Because the vein comes from the leg and goes into the pelvis and if the vein had been cut during the autopsy, that's what I meant about my questions of the technique.

Q. And in milking a vein, as you have pointed out to me when I tried to demonstrate on my arm, you milked, what, approximately distally?



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A. Distally ---

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MR. SCOTT: Well, ask the question

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so I understand it.

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MR. LAMEK: Q. Well, from the

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heart towards the extremities.

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A. No, he would have been milking

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the leg.

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Q. Yes.

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A. So, he would be milking it

towards the pelvis.

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Q. When I did that to my arm,

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thinking that's what I would do, you directed me in

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the other direction, didn't you?

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A. No.

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Q. No, you are quite right, you

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directed me from the extremity towards the body.

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A. The centre.

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Q. Yes. Now, if the leg veins

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therefore had been cut in the process of opening up

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the body cavity, contamination I assume would have

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occurred at the body cavity end of those veins?

A. That's correct, yes.

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Q. And there is no circulation

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at that time, I take it?

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A. No.

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Q. And if therefore Dr. Taylor cut into that vein, or put a needle into that vein, at some point in the leg and massaged from the foot upwards?

A. Yes.

Q. He would not be massaging contaminated material from the body cavity into that point of sampling, would he?

A. No, I wasn't suggesting that. I was just suggesting that if at the end of the autopsy he had made incisions into the iliac vein or something to remove the contents, or whatever they do, you know, you would have to ask them all the gory things they do, but if there had been an open vein there, then there was the probability of contamination from any pelvic fluid into that vein, into the mouth of that vein.

Q. Into the mouth of that vein?

A. Yes.

Q. And is there some suggestion that contamination would travel along the vein?

A. No, but I think at the sampling site it would be a different concentration for sure.

Q. All right.

MR. OLAH: Thank you.



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MR. LAMEK: Q. Just one final matter, Dr. Rowe. Mr. Commissioner, perhaps we can go straight on and wrap this thing up.

THE COMMISSIONER: Yes, yes, by all means.

MR. LAMEK: Q. You have suggested as a possible explanation of the higher digoxin post-mortem levels that events at resuscitation may have played a part. The possibility of that has been raised by you in the course of two or three of the cross-examinations?

A. Yes.

Q. And as I understood your evidence the suggestion is that the events during resuscitation may have operated in one or the other or both of two different ways. First, the possibility of an unintentional administration of digoxin during the resuscitation effort, drug error, confusion or something of that sort, is that one possibility that you raise?

A. Yes.

Q. And I take it that that suggestion has this implicit in it, but in the short time between such an accidental administration and the ensuing death.



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A. Yes.

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Q. There would not be time for

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the blood, for the digoxin to be distributed to

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tissue, would remain in the blood and would thus

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account for the high postmortem readings?

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A. Yes.

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Q. The second suggestion, as I

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understood you, is that the events and actions that

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occurred during a resuscitation: heart massage,

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defibrillation, pounding and pushing, and perhaps

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intracardiac injection, may somehow squeeze or jar

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or shock digoxin, digoxin molecules out of heart

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tissue into blood. Do I understand the second

suggestion?

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A. Yes, that's the way I thought.

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Q. Can we just look briefly at

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those two suggestions. In the first place there is

the possibility of ---

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THE COMMISSIONER: Are those the

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only two? I find it a little unfair to ask you

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questions about something that is clearly not your

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expertise.

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THE WITNESS: Yes, I was about to

say that.

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THE COMMISSIONER: And it certainly

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won't be held against you, but are those the only
two that you have in mind? Some others may have
10 or 12.

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THE WITNESS: Yes, it's very likely
there will be others. I can't remember whether I
had others or not now.

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MR. SCOTT: I presume the ceremony
ends by granting a pharmacology degree to Dr. Rowe.

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THE COMMISSIONER: You would think
so. Perhaps not a degree but at least part way,
perhaps the first year's certificate. He's got to
have more confidence before I will give him a degree.

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MR. TOBIAS: Mr. Commissioner, I
say this with deference and with a little bit of
trepidation since we have just finished with what
must have been a heroing experience for Dr. Rowe.

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THE COMMISSIONER: He hasn't finished
yet though I don't think.

MR. TOBIAS: Well, you will note
that Mr. Scott introduced three particular exhibits
that were articles on SIDS yesterday. I just want
to note for the record that I still have not seen
those records, nor have I read them. I don't know
that I will want to cross-examine on them at all but
once I have read them and made that determination I



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would like to think that I reserve my rights.

MR. SCOTT: It's too bad that Mr. Tobias was a little late in arriving this afternoon and he missed the afternoon mail, but he now has it.

THE COMMISSIONER: Some day I am going to lower the boom on cross-examining witnesses who haven't written articles and have merely read them on the merits of the articles. I am not that impressed, and I say this with no disrespect to Dr. Rowe, but the fact that he may have liked an article, I would rather have the author of the article.

MR. TOBIAS: Yes, I understand. It may be unnecessary for me to ask any questions but until I have read the articles I can't know that.

THE COMMISSIONER: No, no. But even if you found it necessary I'm not too sure how valuable it would be, although, when I say that to you, Mr. Tobias, certainly any number of other counsel have been permitted to cross-examine on articles, or examined or cross-examined, how long that is going to be part of the conduct of this Inquiry I don't know.

Yes, all right.



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MR. LAMEK: Mr. Commissioner, with respect, I suggest that if the Doctor has indicated his adoptions of a possibility, surely one is entitled to ask him the basis upon which he adopts it and to test the reasonableness.

THE COMMISSIONER: Well, perhaps you may, but surely the fact is that he adopts it, if he had adopted it at some point, it really wouldn't matter that much whether it was right or wrong. The only thing is that he adopted it, that's all. The truth or validity of it - this is of course again the end of a long week, I may not be thinking this thing out clearly, but I would much rather have this mysterious author - please, don't indicate that I want him, leave him alone, leave him where it is.

MR. SCOTT: It is an important point, Mr. Commissioner. I join with Mr. Lamek. I understand why one wants to deliver Mr. Tobias and perhaps too wide a scabbard was used in dealing with him because there is a well known tradition of introducing articles in this fashion for the very purpose that Mr. Lamek has introduced, or has suggested, and if you feel that we're wrong about doing that, we should know, because then it may be necessary to call the evidence.



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THE COMMISSIONER: No, what I am saying is that the cross-examination that you are putting to Dr. Rowe, not you particularly, one is putting to him about the validity of an opinion set forth in somebody's article, the article itself may be of some value to us because I can receive that kind of evidence which I couldn't do at trial, but I don't know how valuable it is, particularly if it is an article on something that Dr. Rowe concedes he's not an expert on.

MR. SCOTT: Well, it is an important question. I concede that there may be very limited value in putting an article to Dr. Rowe on a pharmacological matter because he's not able to, with expertise, assess that.

THE COMMISSIONER: That's right.

MR. SCOTT: But if you put him to an article such as the New England article or the SIDS article and if he adopts a statement in it, I think then you are entitled to have the article and it is support for his proposition.

THE COMMISSIONER: Yes, all right.

MR. SCOTT: Now, if there is any reservation about that in your mind, I would appreciate knowing in due course, not now, because ---



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THE COMMISSIONER: Thank you for the
due course?

MR. SCOTT: Because the New England
article, for example, is significant. If you want us
to call the New England people we will. I don't want
to.

THE COMMISSIONER: Please don't. I
surrender, I'm sorry I raised the issue at all.

MR. SCOTT: That's good enough for
me.

THE COMMISSIONER: I just was hoping
to stop Mr. Tobias standing up and insisting Dr. Rowe
come back on Tuesday.

MR. SCOTT: Too broad a scabbard
dealing with him because he got us into these troubles.

THE COMMISSIONER: Maybe if we get
Dr. Rowe to write you a letter or something, that
will solve the problem.

All right, go ahead.

MR. LAMEK: Q. Well, Dr. Rowe,
recognizing that you are not either involved very
much these days in resuscitation efforts.

A. Yes.

Q. And that you are not a
clinical pharmacologist or any of those things, did



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I understand you to say that you think it may indeed
be the case that the events of a resuscitation may
have an effect upon the postmortem digoxin levels
recorded on the basis that I spelled out to you.

A. Yes, I believe that is the
case.



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Q. May I then just briefly
explore the two possibilities with you, and I promise
I will be brief.

The first possibility of confusion
of drugs in the course of resuscitation --

A. Yes.

Q. -- can you tell me first
with which drugs you suggest there may be confusion and
digoxin? With which other drug or drugs and digoxin
might there be confusion?

A. I think there could be
confusion with epinephrine, with propanolol. I think
any ampoule with a clear liquid in it, there could be
confusion.

Q. Those two drugs come packaged
in that way, do they?

A. I think so.

Q. I take it the suggestion of
the possibility of confusion of drugs during resus-
citation is concomitant with the suggestion from the
pharmacological pharmacologists that the administra-
tion by error of one ampoule of the adult concentration
during resuscitation could account for post mortem
blood levels of the order that we have seen in these
children?



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A. I believe that is the basis,
yes.

Q. That is part of the view
which you say you believe could occur?

A. Yes, I think that is theo-
retically possible.

Q. Now, we have agreed that it
is unlikely, I think, that digoxin -- or was digoxin
on the 4A/B crashcarts?

A. Yes.

Q. We won't go through all the
evidence leading to that ~~confusion~~ ^{conclusion}, you have told us
that.

The Resident's Handbook, for what
it is worth, lists in its back cover the cardiac
resuscitation drugs, and I am sure you are aware
digoxin is not included in that list, doctor?

A. Yes, that is right.

Q. And, indeed, in the passage
on resuscitation on pages 467-468, there is no
reference there to digoxin.

A. No.

Q. And you would not expect
there to be?

A. I would not expect there to
be.



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Q. May I have it, therefore, doctor, that for this explanation to be valid for even one case, the explanation of confusion of drugs at resuscitation resulting in the administration of an ampoule of the adult digoxin instead of an ampoule of something else, for that explanation to run in even one case, there have to be three mistakes:

First, there would have to be digoxin on the crashcart, and it is not usually there, is it?

A. That is right.

Q. Second, digoxin itself would have to be mistaken for the other drug?

A. Yes.

Q. And third, it would have to be the adult digoxin ampoule that was on that cart; not the pediatric ampoule?

A. I think that is right. But, again, you are getting me out of my depth a bit here in terms of the level, in terms of the amount to get that level. I think it is one adult.

Q. One adult, which is the pharmacologist's view, is it not?

A. Yes.

Q. Will you not agree with me,



Rowe
re.dr. (Lamek)

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doctor, that this is a pretty unlikely set of
circumstances and errors to come together once?

A. I agree.

Q. And it is an extremely
remote possibility that those three would come together
repeatedly?

A. Yes.

Q. Now, with respect to the
second suggestion; that is, the --

MR. OLAH: Excuse me, I'm sorry
to intrude. This might be an appropriate time to
seek from Dr. Rowe whether he was able to find any
material -- you will recall, in my cross-examination,
I asked the doctor whether there was any material
with respect to what was supposed to be on the crash-
cart. Perhaps, if Mr. Lamek moves on, Dr. Rowe
could assist us with whether he was able to find any
manual or a list of the drugs on the crashcart and
whether digoxin was one of them.

THE WITNESS: I am sorry, I haven't
got that manual together; I haven't explored that -
I had forgotten about that issue - and I will do so.

MR. OLAH: Thank you, Mr. Commissioner.

THE COMMISSIONER: Whatever happened
to our crashcart?



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MR. SCOTT: Oh, Mr. Strathy, we freed up a crashcart and Mr. Strathy said he didn't want to see it anymore. We showed him a picture and he was satisfied with that. If you would like one --

THE COMMISSIONER: No, no, please.

MR. SCOTT: You might even be carried out of here in a crashcart!

THE COMMISSIONER: Yes!

MR. LAMEK: Q. Doctor, I promise I am trying to get you out of here.

The second aspect of the resuscitation suggestion, the unbinding or dislodging of digoxin from the heart as a result of resuscitation efforts.

Doctor, are you aware of any empirical evidence to support that possibility?

A. I don't know of that evidence. I have had that view expressed to me by the pharmacologists, but I don't know on what basis they had it.

Q. I take it you have not enquired of them whether there is any reported empirical evidence of that?

A. No.

Q. Second on that point, though, I take it that, since March 1981, post mortem digoxin



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levels have been taken from children who die on
Ward 4A/B?

A. Yes.

Q. And I take it that some
of those children underwent resuscitation efforts?

A. I think so.

Q. Do you know whether there
has been seen in any post mortem blood of any child
who died on the ward after a resuscitation effort
anything approaching a level of 78 nanograms?

A. No, I don't think so.

Q. Do you know what is the
highest post mortem blood level seen in such a child
since March of 1981?

A. I have an idea it was about
15.

MR. SCOTT: I think, to be fair,
I have the answer to that question, if my friend wants
it.

THE COMMISSIONER: I don't know. It
seemed to me the Murphy child.

MR. SCOTT: Yes. The Murphy child,
I think, was 24-25; a long resuscitation and a reading
of, I think, 24-25.

THE WITNESS: That is right.



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MR. SCOTT: I read that in at one point in my cross-examination.

THE COMMISSIONER: Yes, that is my recollection of the Murphy child.

But outside of the Murphy child, I take it your recollection is nothing higher than 15?

THE WITNESS: I think so.

MR. LAMEK: Thank you. I am grateful to Mr. Scott.

Q. Doctor, may I have it that, in any event, neither of these theories or suggestions, even if accepted, would help to explain the arrest of the child in the first place? They don't help us to understand why the child arrested?

A. No.

Q. They don't help us to understand or provide any explanation for any arrhythmias preceding or accompanying the arrest?

A. No.

Q. They don't help us to understand or to explain any, what I call, conduction anomalies preceding the arrest --

A. No.

Q. -- switches to and from sinus injunction or rhythm, A/V blocking or any of



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those things?

A. No.

Q. All they could explain, if established to be possible, is why there is a high level in the blood?

A. Yes.

Q. And even that would not, of necessity, preclude a pre-mortem administration of the drug, would it?

A. No.

Q. Doctor, I have come to the end of my questions. I have to say you have been a most enormously patient and courteous witness and we are most grateful to you. Thank you very much.

A. Thank you.

THE COMMISSIONER: I would like to echo my thanks. You have been very helpful to us and I suggest you get out of here as quickly as you can and don't return unless we send a couple of burly policemen!

THE WITNESS: Thank you, Mr. Commissioner.

--- witness withdraws.

THE COMMISSIONER: Thank you very much. Then, I guess, until Tuesday at ten o'clock.

--- whereupon the hearing was adjourned until Tuesday, the 6th day of September 1983 at 10:00 a.m.

